



May 16, 2008

By: FEDERAL EXPRESS

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Pekin, Illinois 61555-0010
309/347-9200
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www.aventinere.com

James Entzminger
Chemical Emergency Preparedness and Prevention Section (SC-6J)
United States Environmental Protection Agency
77 West Jackson Boulevard
Chicago, Illinois 60604

**Re: Request for Information Pursuant to Section 104(e) of CERCLA for
Aventine Renewable Energy, Inc., in Pekin, Illinois**

Dear Mr. Entzminger,

Aventine Renewable Energy, Inc. ("Aventine") received an information request pursuant to the authority of Section 104(e) of the CERCLA on April 25, 2008. The Information Request is in regards to a release of sodium hydroxide that occurred at the dry milling facility on March 27, 2008. Enclosed is the response to the questions from the Information Request.

If you have further questions do not hesitate to contact Steve Antonacci at (309) 347-9241.

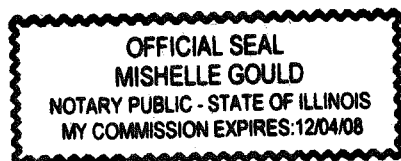
Sincerely,

A handwritten signature in black ink, appearing to read "Jerry Weiland", is written over a horizontal line.

Jerry Weiland

Vice President of Operations

Enclosure: Response to Information Request



Mishelle Gould
May 16, 2008

INFORMATION REQUEST

1. **Steve Antonacci, Environmental Manager; Darin Osland, Environmental Specialist; Daryl Johnson, Environmental Technician; Rick Towery, Production Manager; Ted Percefull, Dry Mill Area Manager; Chad Campbell, Production Coordinator; Jon Maas, Lab Manager; Lynn Landman, Vice President, General Counsel and Secretary; Emily Smith, Legal Assistant; Mark Blunier, Process Engineer; Mike Brown Dry, Mill Operator; Craig Cooney, Dry Mill Operator; Tim Bond, Dry Mill Operator**
2. **Copies for all documents consulted, examined, or referred to in this response are attached and are as follows:**
 - Attachment #1: Sections of Aventine's Chemical Safety Contingency Plan**
 - Attachment #2: List of employee names who received training in spill response**
 - Attachment #3: Amended and Restated Certificate of Incorporation for Aventine Renewable Energy, Inc.**
 - Attachment #4: Amended and Restated Certificate of Organization for Aventine Renewable Energy, LLC**
 - Attachment #5: Amended and Restated Operating Agreement of Aventine Renewable Energy, LLC**
 - Attachment #6: Stock certificate**
 - Attachment #7: Sodium Hydroxide Material Safety Data Sheet (MSDS)**
 - Attachment #8: Diagram of spill location, distance to nearest neighbors**
 - Attachment #9: Map with 3 kilometer radius around Aventine's Pekin Facility**
 - Attachment #10: Identification and Classification of Land Use Types Table**
 - Attachment #11: Meteorological Data from National Climactic Data Center, Greater Peoria Regional Airport**
 - Attachment #12: Follow-up letter sent to Illinois Emergency Management Agency**
 - Attachment #13: Follow-up letter sent to Local Emergency Planning Commission**
3. **92-992-2839**
4. **Aventine Renewable Energy is a RCRA Facility. EPA Identification Number: 1790605002**

5. **Sections of Aventine's Chemical Safety Contingency Plan (CSCP) are attached. See attachment #1.**
6. **On July 26, 2007 Annual Refresher Training was given by the Environmental department and highlighted spill response and notification requirements. The training is given annually to the entire staff of Aventine. A list of all employees attending and completing the quiz is attached. See attachment #2.**
7. **Aventine Renewable Energy, Inc. 120 North Parkway, P.O. Box 1800, Pekin, IL, 61555-1800.**
8. **Aventine Renewable Energy, Inc. 1300 South 2nd Street, P.O. Box 10, Pekin, IL, 61555-0010.**
9. **See attachment #3.**
10. **Aventine Renewable Energy, Inc. is a wholly-owned subsidiary of Aventine Renewable Energy, LLC, which is a wholly-owned subsidiary of Aventine Renewable Energy Holdings, Inc. See attachments #4, #5.**

Attachment #6 is a copy of the Operating Agreement for Aventine Renewable Energy, LLC as evidence that Aventine Renewable Energy Holdings, Inc. holds 100% of the membership interests in the LLC. Also attached is a copy of the stock certificate indicating that Aventine Renewable Energy, LLC holds 100% of the outstanding shares of Aventine Renewable Energy, Inc.

11. **N/A**
12. **N/A**
13. **N/A**
14. **#1 evaporator was being cleaned with a water/sodium hydroxide solution of approximately 12% concentration. Two manual valves were inadvertently left open which caused water to fill the evaporator and pressurize the system. A rupture disk designed to protect the vessel from over pressurizing burst. The excess pressure and liquid surged through a relief line to the outside of the building. The vent line discharges horizontally out of the building approximately 20 feet above the ground. The hot sodium hydroxide and water mix poured out the vent on to the gravel below. The solution eventually made its way to an area storm drain located 50 feet from the building.**

An evaporator is a vessel used to boil out water from non-fermentable liquids (thin stillage) left over from the fermentation and distillation process. There are four evaporators in the "first effect" evaporation system, evaporators #1, 2, 3 and 4. All four evaporators are connected to a common header with a rupture disk in between each evaporator and the header. The only purpose of this header is to serve as a

pressure relief should the pressure within any of the evaporators exceed the capacity of the rupture disk.

Sodium Hydroxide (NaOH) is a common chemical used to clean process tanks such as evaporators. Sodium hydroxide solution is used in a Clean In Place (CIP) system. A CIP system is used to clean several process tanks via a common network of pipes that are all linked to a sodium hydroxide storage tank. Sodium hydroxide arrives on site, and is normally stored, at a concentration of 50%. For the purposes of cleaning an evaporator, the sodium hydroxide is diluted with water to a concentration of approximately 12% before being used. For most other CIP's sodium hydroxide is diluted to a concentration of 5 - 6%.

15.

Time	Action
9:08 – 9:15	#1 Evaporator taken off-line and drained of product by opening the manual #1 evaporator drain valve to the drain pump to prepare for CIP. In the same time frame, operator opens the manual 'CIP in' valve on the CIP header.
9:16 – 9:20	Transferred 50% sodium hydroxide from the sodium hydroxide supply tank to CIP tank to bring concentration of CIP tank to 12%*.
9:22 – 9:54	Methanator feed (rinse) water is fed into the CIP header to #1 Evaporator. #1 evaporator circulation pump activated to move rinse water around evaporator. Tank then emptied and ready for CIP solution.
10:22 – 10:30	3,080 gallons of 12% sodium hydroxide solution transferred via the CIP header from the CIP Tank to #1 Evaporator. Both manual valves left open after transfer completed.
10:30	Circulation pump on evaporator activated.
10:31 – 13:48	Transferred rinse water to CIP tank to dilute sodium hydroxide solution from 12% to 6.5% in preparation of cleaning the 'A' mash train coolers.
13:49	'A' mash train coolers taken off-line for CIP.
13:56 – 14:01	Control room operator opens valve from methanator feed tank to CIP header to rinse 'A' mash train coolers. Rinse water follows the header to #1 evaporator because both manual valves still open.
14:02	Field operator checks sight glass on 'A' mash train coolers to see if rinse water is in the system. He notes no flow and contacts the control room operator to stop and start the CIP pump.
14:03 – 14:09	Rinse water continues to enter #1 evaporator. To the best of our knowledge, this is the time when the rupture disk burst.
14:10	Rinse water shut off to the CIP header
14:11 – 14:14	6.5% sodium hydroxide solution sent from CIP tank into CIP header. Its intended path is to the 'A' mash train coolers however the sodium hydroxide solution follows the header to #1 evaporator. In this same time frame, the 2 nd shift relief operator notices the sodium hydroxide/water solution pouring out of the emergency relief line.
14:15	Field operator shuts manual valves to #1 evaporator.
14:17	Control room operator notified of the release and de-activates #1

- evaporator circulation pump. This stops the release.
- 14:18 – 14:31 With #1 evaporator circulation pump off, the contents of the evaporator settle to the base causing the level to rise. The control room operator notices level rising on evaporator and fearing the tank would overflow through the emergency header, he starts the pump; not realizing that the circulation pump is sending a portion of the solution out the relief vent. The pump is started and stopped 2 more times.
- 14:33 – 14:54 Remaining contents of CIP tank transferred to another holding tank to make room for spent CIP solution from #1 evaporator.
- 14:55 – 15:15 Contents of #1 evaporator sent to CIP tank.
- 15:15 – 15:22 As #1 evaporator's final contents were drained to the CIP tank, the contents of the CIP tank were drained to the waste CIP tank.

* A titration method is used to determine the concentration of NaOH in the sample. It involves titrating a NaOH sample against a known concentration of hydrochloric acid (HCl) until the pink phenolphthalein turns clear. At that point, the milliliters of HCl is equal to the percent NaOH in the sample.

16. Sodium Hydroxide (NaOH) CAS number: 1310-73-2
17. The capacity of #1 evaporator is 10,000 gallons. The evaporator was empty after the rinse was completed.

a	12% sodium hydroxide solution	3,083
b	Methanator feed (rinse) water	8,030
c	6.5% sodium hydroxide solution	2,655
	Total into evaporator	13,768
d	Total collected in CIP tank	4,869
e	Total gallons out emergency vent	8,899
f	Gallons recovered	100
g	Total gallons released to storm drain	8,799

- a. The CIP tank has a capacity of 22,500 gallons. The operator tested the concentration of the CIP solution and confirmed it was 12% sodium hydroxide before sending the solution to the evaporator. The level on the CIP tank dropped 13.7% during the transfer to the evaporator.
 $22,500 \times 13.7\% = 3,083$ gallons
- b. The methanator supply tank has a capacity of 146,000 gallons. The level on the tank dropped 3.5% during the 15 minutes the methanator supply water was pumped to the evaporator. However, the calculation must include the volume that was also being sent to the methanator. The line to the methanator does not contain a flow transmitter. In order to calculate the flow to the methanator, the level on the methanator supply tank must be tracked for the same duration as the transfer but without the rinse cycle. During the 15 minutes immediately following the rinse cycle the methanator supply tank level went up by 2%. The combination of the two percentages is the true flow to the evaporator.
 $146,000 \times (3.5\% + 2.0\%) = 8,030$ gallons

- c. After the 12% solution was transferred from the CIP tank to the evaporator methanator feed (rinse) water was added to the CIP tank to dilute the solution to 6.5% in preparation for a CIP of the 'A' mash train coolers. The CIP tank level increased from 25.5% to 47.3%.

$$((25.5\%/47.3\%) \times 12\%) \times 100 = 6.5\% \text{ NaOH solution}$$

The CIP tank's level (with the 6.5% NaOH solution) dropped 11.8% when the flow was sent the 2nd time to the evaporator.

$$22,500 \times 11.8\% = 2,655 \text{ gallons}$$

- d. After the release, the evaporator was drained back to the CIP tank. The 6.5% NaOH solution in the CIP tank was transferred into another storage tank prior to sending the contents of the evaporator. The CIP tank level increased 21.6%.

$$22,500 \times 21.6\% = 4,869$$

- e. Total gallons into evaporator tank minus total gallons collected in CIP tank.

$$3,083 + 8,030 + 2,655 = 13,768 - 4,869 = 8,899 \text{ gallons lost}$$

- f. The emergency vent discharge is horizontal 20 feet above the ground. When the solution impacted the gravel base it created 2 large depressions. The sodium hydroxide solution that remained in the puddles was captured with a sump pump.

The first depression made was approximately 3 feet long by 2 feet wide, and was 1.5 feet deep or 9 cubic feet.

$$2 \times 3 \times 1.5 = 9 \text{ ft}^3 \quad 9 \times 7.48 \text{ gal/ft}^3 = 67.3 \text{ gallons.}$$

The second depression was approximately half the size, or 4.5 cubic foot.

$$9 \text{ ft}^3 / 2 = 4.5 \text{ ft}^3$$

$$4.5 \times 7.48 \text{ gal/ft}^3 = 33.66 \text{ gallons.}$$

$$67.3 + 33.7 = 100 \text{ gallons collected}$$

- g. Total gallons out emergency vent minus gallons recovered.

$$8,899 - 100 = 8,799 \text{ gallons}$$

The concentration of the sodium hydroxide solution that was released has been determined to be 4.1%. This is based on the dilution of the original sodium hydroxide solution with water and the 6.5% NaOH solution.

$$3,083 \text{ gallons of } 12\% \text{ NaOH}$$

$$3,083 \times 12\% = 369.96 \text{ gallons of NaOH}$$

$$2,655 \text{ gallons of } 6.5\% \text{ NaOH}$$

$$2,655 \times 6.5\% = 172.58 \text{ gallons of NaOH}$$

$$369.96 + 172.58 = 542.54 \text{ gallons of } 100\% \text{ NaOH}$$

$$(542.54 / 13,768 \text{ total gallons into evaporator}) \times 100 = 4.1\% \text{ sodium hydroxide}$$

From that calculation it was determined that the reportable quantity (RQ) had been exceeded for sodium hydroxide. Sodium hydroxide has a RQ of 1000 lbs.

Specific Gravity of NaOH = 2.13
Specific Gravity of water = 1
1 gallon water = 8.34 lbs
 $2.13 \times 8.34 \times 1 = 17.76$ lbs/gallon of NaOH

$17.76 \times (569.54 \text{ gallons released} - 4.1 \text{ gallons collected}) = 10,042$ lbs of sodium hydroxide released

***100 gallons recovered at 4.1% $100 \times 4.1\% = 4.1$ gallons NaOH recovered**

18. **The sodium hydroxide solution was released onto the ground which was covered in "white rock" or gravel. Refer to #17 for quantity calculations.**
19. **No known quantity of the spill migrated to the underlying soil. The slope of the area suggests that it quickly flowed to the storm drain before much absorption could occur.**
20. **No known quantity of the sodium hydroxide volatilized.**
21. **No quantity of the spill was discharged to the sanitary sewer system.**
22. **It is estimated that 10,042 pounds of sodium hydroxide was discharged to the storm drain. Refer to #17 for calculations.**
23. **No known by-products were created or discharged.**
24. **Upon reaching the storm drain, the concentration of the sodium hydroxide is expected to be no more than 4.1%, as noted in response #17.**

Upon reaching the NPDES permitted outfall at the Illinois River, the concentration was approximately 0.22 – 0.28%.

The release lasted for approximately 22 - 28 minutes. This will be discussed in the response to question #36.

The release entered a storm drain that combines with the blowdown streams from the dry mill cooling tower and boiler. This stream ties into the cooling water, waste water treatment effluent and storm water that discharges from the corn wet milling plant located on the same property. The estimated discharge from the total plant stream for the day was 28,108,000 gallons*

$28,108,000 / 24 \text{ hr} / 60 \text{ min} = 19,519$ gallons per minute
 $19,519 \text{ gpm} \times 8.34 \text{ lb/gal} = 162,789$ lbs water per minute

Pounds of sodium hydroxide released 10,042
 $10,042 / 22 \text{ minutes} = 456 \text{ lb/min}$

10,042 / 28 minutes = 359 lb/min

(456 lb NaOH / 162,789 lb H₂O) x 100 = 0.28% NaOH

(359 lb NaOH / 162,789 lb H₂O) x 100 = 0.22% NaOH

*The NPDES outfall has a flow totalizer that calculates the flow based on a Parshall Flume. However during the time of the release, the Illinois River was above the Flume which prevented the flow calculation to be determined. Aventine used the average flows from the last month of totalized flow values.

25. **The MSDS for Sodium Hydroxide (NaOH) is attached to this document. See attachment # 8**
26. **Sodium Hydroxide is not a listed RCRA hazardous waste. If the pH of sodium hydroxide is greater than or equal to 12.5, it would exhibit a corrosive characteristic and have the Hazardous Waste Number of D002.**
27. **The release entered a storm drain that combines with the blowdown streams from the dry mill cooling tower and boiler. This stream ties into the cooling water, waste water treatment effluent and storm water that discharges from the corn wet milling plant located on the same property. The combined flows are sampled with a 24-hour composite sampler. The Chemical Oxygen Demand (COD) results for the date of the release, March 27, as well as the 26th and 28th of March, 2008 were:**

3/26 TPE: COD 25 mg/l
3/27 TPE: COD 18 mg/l
3/28 TPE: COD 20 mg/l
28. **After the release was discovered, absorption socks were placed around the storm drain that the water/sodium hydroxide mixture was draining in to. As noted in response #22 portable pumps were utilized to collect the contents in the depressions created in the gravel. A cleaning service with a vacuum truck was on the scene approximately 2 hours after the release to collect any residuals of the spill from the storm drain. In addition, well water was sprayed on the gravel to rinse the area of the sodium hydroxide/water mixture to the vacuum truck. The vacuum truck transported the liquids collected to the onsite waste water treatment facility.**
29. **No, the release resulted when the contents of a common header emptied outside of the process building.**
30. **Yes, the release entered a storm drain that combines with the blowdown streams from the dry mill cooling tower and boiler. This stream ties into the cooling water, waste water treatment effluent and storm water from the corn wet milling plant which exits a NPDES permitted discharge to the Illinois River**
31. **Aventine does not have a permit that covers the release of sodium hydroxide.**
32. **The release was not into a secondary containment.**

33. A diagram of the facility with the location of the spill and the distance to all property boundaries in relation to the spill is attached to this document. See attachment #9.
34. Based on the land use typing scheme established by Auer (Auer,1978), the rural classification comprises greater than 50% of the area contained within the 3-kilometer radius circle surrounding the Pekin Facility. Thus, the area surrounding the Pekin facility is considered rural. See Attachment #9. There are some Heavy and Light-Moderate Industrial (I1, I2) facilities to the north and south of the Pekin Facility. See attachment #10. There are also Common Residential (R1) areas to the east of the facility. See attachment #12. The Illinois River is to the west of the facility.
35. The release occurred from a process tank, and pressure relief system incorporated within the process. The release did not result from a leak from a storage area.
36. Based on the timeline of events noted in the response to question #17, the release occurred for approximately 22 -28 minutes.
37. All meteorological data was collected from the National Climactic Data Center for the station at the Greater Peoria Regional Airport. On March 27, 2008 at 2:31 p.m. it was 39 degrees Dry Bulb Fahrenheit, with a Relative Humidity of 89%. The wind was out of the northeast at 20 miles per hour. The hourly precipitation was recorded at 2:54 p.m. to be 0.8 inches. It was cloudy, with a barometric pressure of 29.1 inches mercury. See attachment #11.
38. The release was from a pressurized system. The system is normally between 11 and 15 pounds per square inch atmosphere (psia). The pressure of the system is determined by the rupture disk which is rated at 14 pounds per square inch gauge (psig).
39. Based on calculations from the response to question #17, 12% and 6.5% solutions of sodium hydroxide entered the evaporator. The combined total of sodium hydroxide in the system at the time of release was 10,115 pounds.

$$569.54 \text{ gal NaOH} \times 17.76 \text{ lbs/gal NaOH} = 10,115 \text{ lbs}$$

The amount of sodium hydroxide remaining in the system was 3,545 pounds.

Gallons collected in CIP tank 4,869

Concentration 4.1%NaOH

$$4,869 \text{ gal} \times 4.1\% \text{NaOH} = 199.63 \text{ gallons NaOH}$$

$$199.63 \text{ gal NaOH} \times 17.76 \text{ lb NaOH/gal} = 3,545.43 \text{ lbs}$$

40. The release was from a pipe connected to a tank.
41. The connecting pipe from each evaporator to the common header has an inside diameter of 8 inches and has an approximate distance of 2 feet to the header. The

common header has an inside diameter of 14 inches and is approximately 63 feet long. The distance from #1 evaporator to the point of exit from the building is approximately 23 feet.

- 42. There were no evacuations, medical treatment, hospitalizations, or deaths as a result of this release.**
- 43. There was no known environmental damage as a result of this release.**
- 44. The release from the facility was first observed at approximately 2:14 p.m. on March 27, 2008.**
- 45. It was determined on March 28, 2008 at approximately 1:30 p.m. that the RQ of sodium hydroxide had been exceeded.**
- 46. The Process and Instrument Diagrams (P&Id's) were obtained to determine the capacity of #1 evaporator. Trends were reviewed on the DCS to indicate times and levels of process tanks and the CIP system. Production coordinators and operators were also interviewed. It was ultimately concluded after consideration of all factors that the RQ had been exceeded.**
- 47. On March 28th at approximately 2:00 p.m., Steve Antonacci completed the online spill notification form for the National Response Center regarding the release of sodium hydroxide from Aventine's property on March 27, 2008. The NRC responded with a confirmation number of 866313.**
- 48. On March 28th at approximately 2:15 p.m., Steve Antonacci notified the Illinois State Emergency Response Commission regarding the release of sodium hydroxide from Aventine's property on March 27, 2008. . The Illinois State Emergency Response Commission reported the release as incident # H20080410.**
- 49. Bill Nowlin of the Tazewell County Emergency Services Disaster Agency (ESDA) was notified on April 28, 2008 at approximately 3:30 p.m. and notified of the release. After the initial release, it was Aventine's belief that no hazard existed to the general public, and no immediate notification was given to the ESDA.**
- 50. A follow-up letter was sent out on May 19, 2008. See Attachment #13**
- 51. A follow-up letter was sent out on May 19, 2008. See Attachment #14**

Attachment #1

2.0 **Listing of Chemical Substances**

[Illinois Chemical Safety Act, P.A. 84-852, Section 4(b)(1)]

Table 1 includes a listing of hazardous substances, which may be released at the facility, including chemical names, corresponding trade names (if applicable), CAS numbers and summary of the manner in which such substances are stored and used. Table 1 also includes information on chemical reaction/decomposition products, which may be released to the environment, along with recommended fire extinguishing agents (from MSDS).

Chemical storage location within the plant is shown in Figure 1. In addition a facility layout drawing posted at the Security post, on the wall at the plant's main entry gate. This drawing depicts chemical locations, water hydrant location and fire protection systems. This drawing is readily visible and can be referred to by local emergency services when entering the plant during an emergency.

TABLE 1: HAZARDOUS MATERIALS INVENTORY

Chemical	CAS Number	Plant Location	Description	Reaction/Decomposition Products	Recommended Extinguishing Agent
Ammonium Hydroxide (Aqua Ammonia)	1336-21-6	1A	125,000-gal. vertical tank of carbon steel, maintained at 50 to 90 % full. Purpose: nutrients in incubation.	Normal combustion of ammonia in air yields nitrogen and water (steam). Under certain conditions of temperature and pressure some quantity of hydrogen and oxides of nitrogen may also form.	All standard agents are acceptable. (water, carbon dioxide, dry chemical, foam.) use water to keep fire-exposed containers cool and to protect persons effecting the shut-off.
Phosphoric Acid	7664-38-2	2A	28,000-gal. vertical tank of fiberglass – 20 to 50% full. Purpose: used as nutrient in fermentation.	1) Thermal decomposition at flame temperature emits toxic fumes of phosphorous oxides.	Not combustible. Use agents as may be appropriate for materials in surrounding fire.
		2B	3,000-gal. horizontal tank. Purpose: used as nutrient in fermentation.	2) Contact with reactive metals (i.e., mild steel, aluminum) may produce flammable explosive hydrogen air mixtures.	
Caustic (Sodium Hydroxide)	1310-73-2	3A	4,000-gal. vertical carbon steel tank – 20 to 80% full, 50wt% solution. Purpose: used for pH adjustment in process (Waste Treatment Plant)	Will react with some metals generating flammable hydrogen gas.	This product is not combustible. Water spray, foam, carbon dioxide or dry chemical may be used where this product is stored. Avoid direct contact of caustic with water as this can cause a violent exothermic reaction.
		3B	15,000-gal. horizontal tank of plastic-lined carbon steel – 20 to 80% full, 50wt% solution. Purpose: used for cleaning process equipment.		
		3C	3,000-gal. horizontal tank of carbon steel – 10 to 90% full, 50wt% solution. Purpose: used for pH adjustment in Waste Treatment Plant. Process area tanks (Used for caustic cleaning of equipment unless otherwise noted):		
		3D	1) 2,000-gal. CIP supply tank, 5wt%, B7-1 st fl.		
		3E	2) 500-gal. CIP return tank, <5wt%, B7-1 st fl.		
		3F	3) 730-gal. rectifier caustic supply tank, <10wt%, B7-2 nd fl. (Used as a mixing chamber for diluting caustic).		
		3G	4) 2,000-gal. tank, 11.8wt%, B7-2 nd fl. w side.		
		3H	5) 20,000-gal. Beer column reboiler tank, 5wt%, B7-by CO ₂ scrubbers.		

Chemical	CAS Number	Plant Location	Description	Reaction/Decomposition Products	Recommended Extinguishing Agent
Caustic (sodium hydroxide) [Continued]	1310-73-2	3I	6) 270-gal. tank, 50wt%. B17-1 st fl.	Will react with some metals generating flammable hydrogen gas.	This product is not combustible. Water spray, foam, carbon dioxide or dry chemical may be used where this product is stored. Avoid direct contact of caustic with water as this can cause a violent exothermic reaction.
		3J	7) 1,000-gal. CIP Concentration Tank, 5wt%. B17-1 st fl.		
		3K	8) 2,000-gal. tank, 5wt%. B17-3 rd fl. (Used to add caustic back into system.)		
		3L	9) 16,000-gal. tank, 5wt%. B17-3 rd fl. (Used to add caustic back into system).		
		3M	10) 266-gal. tank, 21.5wt%. B20 (Used for neutralization of boiler feed water).		
		3N	11) 266-gal. tank, 21.5wt%. B20 (Used for neutralization of boiler feed water).		
		3P	12) 5,000-gal. tank 10 wt%. B85-1 st floor. (Makeup tank for CIP)		
		3Q	13) 7,500-gal. tank 10 wt%. B85-1 st floor. (Spent tank for CIP)		
		3R	14) 7,500-gal. tank 50 wt%. B85-1 st floor. (Storage tank for CIP)		
		3S	15) 14,200-gal. tank. Dry Mill Process Building. (Spent tank for CIP)		
		3T	16) 14,200-gal. tank. Dry Mill Process Building. (Storage tank for CIP)		
		3U	17) 22,500-gal. tank. Dry Mill Process Building. (Makeup tank for CIP)		
		3V	18) 325-gal. tank. Dry Mill Process Building.		
		3W	19) 4200-gal. tank. Dry Mill Process Building.		
Sodium Hypochlorite	7681-52-9	4A	6,500-gal. HDP tank, 90% full (Waste Treatment Plant area).	1) Decomposes under various mechanisms. May generate chlorine or oxygen. 2) Reacts vigorously with amine, ammonium acetate, ammonium oxalate, acids and most organics.	Use any means suitable for extinguishing surrounding fires. Wear fully encapsulated suits with SCBA.
		4B	5,500-gal. HDP tank, 90% full (No. 12 Well)		
		4C	2,500-gal. HDP tank, 90% full (No. 8 Well). Purpose: Biofouling Control.		
		4E	900-gal. tank, Dry Mill Water Treatment Building.		
		4F	900-gal. tank, Dry Mill Water Treatment Building.		

Ethanol	64-17-5	5A 5B 5C 5D 5E 5F	Denatured: 1,260,000-gal., 30 to 90% full. Undenatured: 1,260,000-gal., 30 to 90% full. Technical: 60,500-gal., 15 to 70% full. Off-Code: 126,000-gal., 0 to 20% full. Undenatured: (2) 63,000-gal., 0 to 90% full. 190-proof: (2) 37,600-gal., 70% full. All vertical tanks of carbon steel are covered, internal, floating-roof tanks. Purpose: products of manufacture.	1) Capable of reacting with oxidizing agents: nitrates, peroxides, acids, etc. 2) Reacts with alkali metals to produce hydrogen. Do not store in Aluminum.	Dry chemical, carbon dioxide, alcohol foam, water spray. Water spray may be ineffective in extinguishing fire but useful to dilute and flush spills and cool area.
Liquid Natural Gasoline, Naphtha ("raffinate", and Unleaded Gasoline (contains benzene @ an avg. of 1.4wt%)	68425-31-0 68410-71-9 8006-61-9 Benzene: 71-43-2	6 21	126,000-gal. carbon steel tank with floating roof – 40 to 60 % full. Purpose: used as denaturant. 1,000-gal. split-wall horizontal carbon steel tank. One side contains unleaded gasoline; approximately 500 gallons. The E-85 (85% Ethanol, 15% unleaded gasoline) that was on the other side has been removed. Purpose: automotive fuel.	Naphtha and liquid natural gasoline's hazardous decomposition products are carbon monoxide, aldehydes, and aromatics.	Class B fire-extinguishing media such as halon, CO ₂ or dry chemical can be used. Caution must be followed after extinguishing due to ease of re-ignition of hot vapors. Flashback may occur along vapor trail. Avoid use of solid water streams. Water may be ineffective in extinguishing low flash point fire, but can be used to cool exposed surfaces. Avoid excessive water application.
Chemical Fuel Oil Kerosene Diesel Fuel	CAS Number 8008-20-6	Plant Location 10A 10B 10C	Description 60,000-gal. Vertical carbon steel tank – 90% full. Purpose: fuel for boilers in utility dept. 250-gal. Horizontal tank 30% - 80% full. Purpose: fuel for heaters. 500-gal. Horizontal carbon steel tank 50 – 90% full. Purpose: fuel for automotive use.	Reaction/Decomposition Products Decomposition products: carbon monoxide, aldehydes, aromatics, and other hydrocarbons incompatible with oxidizers.	Recommended Extinguishing Agent Class – B Extinguishing media, halon, CO ₂ or dry chemicals. Avoid solid water streams or excessive water spray.
Cyclohexylamine	108-91-8	11	4,030-gal. Horizontal tank 50 – 90% full. Purpose: neutralizer for steam condensate.	May react with acids. Destructive fire yields elemental oxides.	Dry chemical, carbon dioxide, and foam. Waterspray used only to cool fire-exposed containers and disperse vapors.

(xylene) Tolad Octel DCI-11	1330-20-7	12	4,000-gal. Horizontal carbon steel tank 10 – 50% full. Purpose: additive for fuel grade ethanol.	Decomposition products: Oxides of nitrogen. Keep away from strong oxidizing agents.	Use water spray or fog, alcohol-type foam, dry chemical or CO ₂ . Vapors can flow along surfaces to distant ignition sources and flash back.
Anhydrous Ammonia	7664-41-7	18	18,000-gal. Horizontal tank – 85% full. Purpose: used as a nutrient and for pH control in fermentation process.	Stable under normal conditions. Corrosive to copper, brass, silver, zinc and galvanized steel. Forms explosive products when in contact with calcium hypochlorite bleaches, halogens, gold, mercury and silver. Heat is generated when ammonia dissolves in water, and a harmful visible vapor cloud is produced from contact with water. Combustion may yield nitrogen oxides. Intense heating of the gas, particularly in contact with hot metallic surfaces, may cause decomposition of ammonia to hydrogen and nitrogen.	Dry chemical or water spray is recommended as extinguishing agent.
Sulfuric Acid	7664-93-9	17	7,900-gal. Vertical tank – 85% full. Purpose: used to neutralize process water in CIP tank.	Normally stable. Avoid temperatures in excess of 300 degrees Celsius: yields sulfur trioxide gas, which is toxic, corrosive, and an oxidizer. Consult MSDS for full list of incompatible chemicals.	Water spray or fog may be used to knock down corrosive vapor cloud. Water may be applied to sides of containers exposed to flames provided the water does not come into direct contact with the contents of the tank. DO NOT use solid water streams near ruptured tanks or spills.

Chemical	CAS Number	Plant Location	Description	Reaction/Decomposition Products	Recommended Extinguishing Agent
Copper Sulfate <1% (MET SOURCE AN)	7758-98-7	20A 20B	Four 250-gal. Totes Purpose: used as micronutrient in wastewater treatment.	As an ingredient in MET SOURCE AN: -Copper sulfate is chemically stable and no known hazardous decomposition will occur -Incompatible with bleaching agents and other oxidizers.	Use any means suitable for extinguishing surrounding fires. Wear fully encapsulated suits with SCBA.
Nickel Chloride <2% (MET SOURCE AN)	7718-54-9	20A 20B	Four 250-gal. Totes Purpose: used as micronutrient in wastewater treatment.	As an ingredient in MET SOURCE AN: -Nickel Chloride is chemically stable and no known hazardous decomposition will occur -Incompatible with bleaching agents and other oxidizers.	Use any means suitable for extinguishing surrounding fires. Wear fully encapsulated suits with SCBA.
Potassium Hydroxide 45% (BWT-200-B)	1310-58-3	19C	327-gal. Tote Purpose: used as an alkalinity builder in the chemical control process for the boiler.	As an ingredient in BWT-200-B: -This product is chemically stable under normal use conditions and temperatures -Hazardous polymerization is not expected to occur -Thermal decomposition and burning may produce carbon monoxide and carbon dioxide.	This product does not burn. Use extinguishing media appropriate to surrounding fire.

3.0 Probable Nature, Routes, and Possible Causes of Release

[Illinois Chemical Safety Act, P.A. 84-852, Section 4(b)(2)]

As required by the Illinois Chemical Safety Act, this section summarizes information on the nature and probable routes of releases, and possible causes which could lead to releases at the facility. The information in this section encompasses worst-case scenarios, maximum anticipated chemical flow rates during worst-case scenarios, and includes other relevant information for each hazardous chemical listed in Table I.

This section contains a summary for each of the following:

- Distance and directions to vulnerable populations
 - Ammonium hydroxide
 - Anhydrous Ammonia
 - Sulfuric Acid
 - Sodium hypochlorite
 - Cyclohexylamine
 - Ethanol
 - Fuel Oil
- Liquid Natural Gasoline, Unleaded Gasoline, Naphtha ("Raffinate")
 - Phosphoric Acid
 - Sodium hydroxide ("Caustic")
 - (Corrosion inhibitors)
 - Octel DCI-11
 - Tolad 3222
- Copper Sulfate (MET SOURCE AN)
- Nickel Chloride (MET SOURCE AN)
- Potassium Hydroxide (BWT-200-B)

PROBABLE NATURE, ROUTES, AND POSSIBLE CAUSES OF RELEASES

DISTANCE AND DIRECTION TO VULNERABLE POPULATIONS, ESSENTIAL SERVICES, AND MAIN TRANSPORTATION ROUTES NEAR THE PLANT:

<u>Potential Receptor</u>	<u>Direction and Distance</u>
<u>Transportation:</u>	
Barge traffic on Illinois River	NW and W: 2,000 ft.
Vehicular traffic on IL State Hwy. 29	E: 300 ft.
Vehicular traffic on U.S. Rt. 24	W: 12,600 ft.
Illinois Central Gulf RR	E and NE: approximately 2,500 ft.
Peoria and Pekin RR	Operate within facility property.
Chicago & Northwestern RR	Tracks N-S along E side of facility.
<u>Adjacent Industry:</u>	
Pekin Paperboard Company	S 10° E: 400 ft.
BOC	W 5° S: 300 ft.
Prax Air	W 5° S: 250 ft.
MGP Ingredients of Illinois	W 30° S: 800 ft.
Continental Carbonics	SW: 700 ft.
<u>Residential Communities:</u>	
Midway (pop = < 2,000)	S 5° E: 10,000 ft.
Crescent (pop = < 500)	S 10° W: 1,500 ft.
Pekin (pop = 34,000)	N 25° E to S 70° E: Adjacent ≈ 300 ft. East.
Marquette Heights (pop = 3,100)	N 30° E: 26,000 ft.
North Pekin (pop = 1,800)	N 25° E: 21,000 ft.
<u>Hospitals:</u>	
Pekin memorial Hospital, 600 S 13 th Street	N 71° E: 9,300 ft.
<u>Power plants:</u>	
AMEREN (Edwards Facility)	N 1° W: 15,000 ft.
MIDWEST GENERATION (Powerton Facility)	S 46° W: 5,900 ft.
<u>Retirement/Nursing Homes (Pekin):</u>	
Lake Manor, 2400 N 8 th Street	N 31° E: 13,200 ft.
Mardel Manor, 1112 S Court Street	N 64° E: 8,900 ft.
Perino Nursing Home, 601 Prince	N 65° E: 6,000 ft.
UAW Senior Citizens Center, 444 Parkway Drive	N 85° E: 13,300 ft.
Pekin manor, 1520 El Camino Drive	S 50° E: 12,400 ft.
Pekin Estates, 1540 El Camino Drive	S 50° E: 12,400 ft.
<u>Schools (Pekin Proper):</u>	
Edison, 1400 Earl Street	N 44° E: 12,200 ft.
Smith, 1314 Matilda Street	N 44° E: 12,800 ft.
Starke, 1610 Holiday Drive	N 49° E: 16,000 ft.
St. Joseph's Parochial School, 300 S 6 th Street	N 49° E: 7,300 ft.
Washington, 501 Washington Street	N 52° E: 6,600 ft.
Pekin High School, West Campus	N 53° E: 8,300 ft.
Jefferson, 900 S Capitol Street	N 56° E: 5,000 ft.

Willow, 1110 Veerman Avenue
Schramm, 300 Cedar Street
Broadmoor, 501 Maywood Street
Dirksen Elementary, 501 Maywood Street
Good Shepherd Lutheran, 333 State Street
Pekin High School, East Campus
Faith Baptist (347-6178)
Wilson, 900 Koch Street
Sunset Hill, 1800 Highwood Drive
Rankin, RR#2

N 57° E: 14,800 ft.
N 66° E: 17,000 ft.
N 68° E: 13,200 ft.
N 68° E: 13,200 ft.
N 71° E: 9,500 ft.
N 77° E: 12,700 ft.
S 86° E: 6,000 ft.
S 86° E: 7,000 ft.
S 81° E: 15,400 ft.
S 22° E: 14,400 ft.

PROBABLE NATURE, ROUTES, AND POSSIBLE CAUSES OF RELEASES

CHEMICAL NAME: *SODIUM HYDROXIDE (CAUSTIC)*

CAS NUMBER: 1310-73-2

GENERAL: Sodium Hydroxide solutions are stored in various locations including a 4,000 gallon and a 3,000 gallon (50% by weight) tanks within a concrete curbed area at the wastewater treatment plant, a 15,000 gallon tank (50% by wt. Solution) within a concrete diked area on the south side of the plant, and various sized tanks within process areas in Bldg. 7, Bldg. 17, and Bldg. 20. Spills in Bldg. 7 would drain into a process area sump for reprocessing. All drains in Bldg. 7 and the process area around Bldg. 7 are routed to process area sumps. The Yeast Plant (Bldg. 85) has three tanks located inside the building's west side within a containment structure on the first floor. Each tank has a working capacity of 7,500 gallons (50% by weight in one tank) and (8% by weight in the other two).

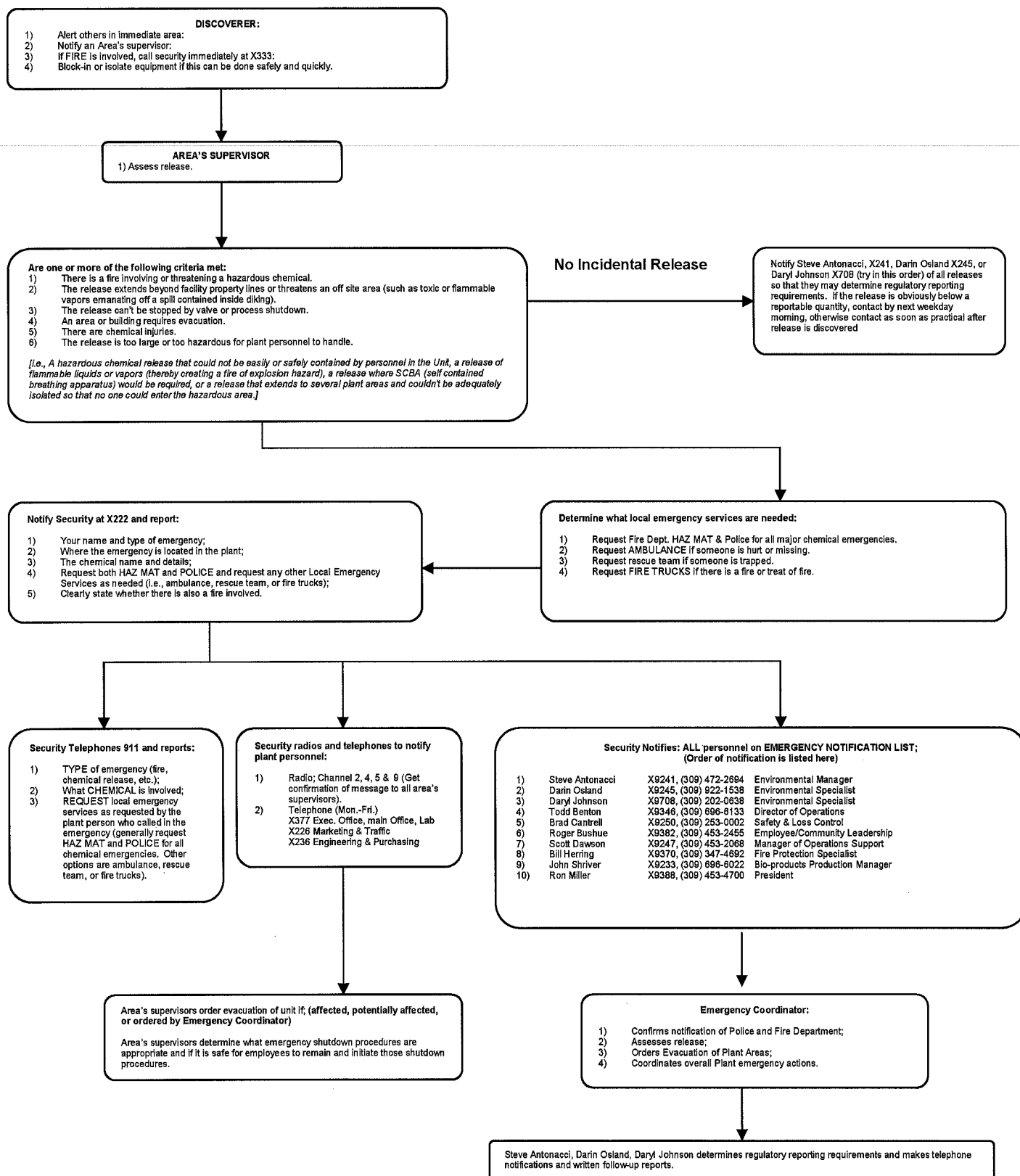
NATURE/ROUTES: Caustic is extremely corrosive to organic tissue. In most areas tanks and piping are contained within diking or curbing. Potential under worst-case scenario for release to reach storm sewers near Bldg. 17 and in Bldg. 20. The storm sewer discharges to the Illinois River approximately .5 miles west of the plant.

POSSIBLE CAUSES:

1. Tank failure or puncture (vehicular accident, external explosion projectile, internal corrosion);
2. Level instrument failure or unintentional overfilling of tank;
3. Leaks in pipes, nozzles, valves, fittings;
4. Old or mistreated hoses that rupture during storage tank filling;
5. Premature drive off that rupture hoses before tank filling operations are completed;
6. Releases associated with maintenance activities;
7. Leaks from pump seals;
8. Support or piping damage due to collision with mobile equipment;
9. Releases from piping due to abrasion from expansion & contraction;
10. Vandalism, sabotage, or terrorism.

WORST CASE SCENARIO: The worst case scenario would be a release from the 16,000 gallon caustic tank (5% by weight solution) in Bldg. 17 which might flow out of the building and into nearby storm sewer drains. A second worst case would be a release from the 266-gallon caustic tank (21.5% by weight solution) in Bldg. 20 to the storm sewer. These types of potential releases are anticipated to have minimal impact on offsite areas.

**FIGURE 2: AVENTINE RENEWABLE ENERGY, INC.
EMERGENCY ACTION FLOW CHART – HAZARDOUS CHEMICAL INCIDENT**



4.0 Response Procedures

[Illinois Chemical Safety Act, P.A. 84-852, Section 4(b)(3)]

Emergency actions, which will be taken in response to hazardous chemical release incidents, are outlined on the flow chart in Figure 2. Emergency actions outlined in Figure 2 are discussed in more detail in the following sections.

4.1 Discoverer

Facility personnel would address minor spills and leaks as a routine maintenance item by identifying the spilled material (determine the origin and refer to container labels or MSDS for proper precautions), blocking in or isolating equipment, and containing and cleaning up the spill with absorbent materials. These would not be an emergency, however, **the involved area's supervisor should be notified of all chemical releases, regardless of size.** The employees determine if they can isolate the release by themselves. If not, they must summon help from their supervisor.

It would be an emergency if there were a large spill of a hazardous chemical, a release of flammable liquids or vapors (thus causing a fire or explosion hazard), a fire involving a hazardous chemical, or a release of a hazardous chemical to soil, surface water, or plant sewers.

- a. If there is a **large spill or release**, the employee who discovers the release shall notify his supervisor of the nature of release involved, prior to making any attempt to eliminate the hazard or isolate the problems.
- b. If the release is related to any equipment, turn the equipment off and block in or isolate the equipment to prevent any further release, if this can be done quickly and safely. If there is any doubt, go to an upwind safe area and wait for the area's supervisor or other help to arrive prior to taking any actions.
- c. If there is a FIRE associated with the release, the discoverer should:
 - 1) Warn others in the immediate area;
 - 2) Contact Plant Security at x333 to request the Pekin Fire Department;
 - 3) Notify the area's supervisor.

The person calling Plant Security to report a fire should give the following information:

Name of employee reporting the fire;
Location of the fire;
Type of fire, if known.
Chemical involved if any.

- d. For a small fire, the discoverer should warn anyone else in the immediate area and if qualified (if the discoverer has had fire extinguisher training) use the fire extinguishers in the department in efforts to contain the fire or extinguish the fire while still in the incipient stage. If possible, the discoverer should approach the fire from an upwind direction to avoid smoke and fumes.

4.2 Identification of Hazardous Materials – Utilities Engineers, Managers and Coordinators

Based upon information reported by the discoverer, the area's supervisor shall immediately identify the nature of the event (e.g. release, fire, and explosion) and determine if a hazardous material is involved.

The area's supervisor will immediately determine the source, identify, character, and amount of hazardous materials involved (as can best be determined quickly). The area's supervisor may initially determine the areal extent of any spill or release by utilizing visual inspection of the material and the location of the release.

The material involved will be identified by cursory discussions with departmental personnel, or by determining the origin.

The area's supervisor may determine the character of the material by referring to MSDS but should consider any chemical listed in Table 1 to be hazardous.

4.3 Initial Assessment – Utilities Engineers, Managers and Coordinators

- A. Concurrent with the identification of what hazardous materials are involved; the area's supervisor will assess the emergency to determine if it can be handled as an *incidental release* where the substances released can be absorbed, neutralized, or otherwise safely controlled at the time of release by employees in the immediate release area (or by maintenance personnel) or if it is a *major release* which requires the assistance of local emergency agencies. An incident involving a hazardous chemical should generally be considered a major emergency if one or more of the following criteria are met:
1. There is a fire involving or threatening a hazardous chemical.
 2. A release of a hazardous material extends beyond facility boundaries or threatens an offsite area (such as toxic or flammable vapors emanating off a spill contained within diking).
 3. The release cannot be stopped by valve or process shutdown.
 4. There are chemical injuries.
 5. An area or building requires evacuation.
 6. The release is too large or too hazardous for plant personnel to handle. For example:
 - A hazardous chemical release that could not be easily or safely contained by personnel in the Unit;
 - A release of flammable liquids or vapors (thereby creating a fire or explosion hazard;
 - ❖ The use of SCBA (a Scott Air Pak) would be required;
 - A release that extends to several plant areas and could not be adequately isolated so no one could enter the hazardous area.

- B. If the incident is a major emergency then the area's supervisor should immediately call Plant Security at Extension 333 and report the following:
- ◆ Your **NAME**;
 - ◆ **TYPE** of major emergency (chemical release with fire, etc.);
 - ◆ **WHERE** the emergency is located in the plant;
 - ◆ **WHAT CHEMICAL** is involved;
 - ◆ **REQUEST** both "**haz-mat**" and "**police**" and other emergency services as appropriate to the situation (additional services are ambulance, rescue team, and fire trucks. See section 4.4 below for guidelines for requesting local emergency services);
- C. Plant Security will bring emergency service vehicles into the plant and to the general area of the emergency. If the emergency location may be hard to find (such as in a plant building) you should assign someone to meet them at a safe (upwind) location in the plant roadway and bring them to the scene.
- D. Notify Steve Antonacci, Darin Osland, Daryl Johnson (try in that order) for all chemical releases (regardless of size or severity) so that they may determine regulatory reporting requirements. If a release is obviously below a reportable quantity for the chemical released notify Steve, Darin, or Daryl by the next weekday morning, otherwise notify one of them as soon as practical after the release is discovered. *(Note: during major chemical emergencies where security is notified at x333 of the emergency, Steve, Darin and Daryl should be notified by Plant Security).*

4.4 Guidelines for Requesting Local Emergency Services

The area's supervisor, where the emergency originates, will direct Plant Security to dial 911 and request specific local emergency services as appropriate for the emergency. The following are guidelines for determining which local emergency services to request under various potential release scenarios:

- Request **Police** and **Haz-Mat** for all major release incidents;
- Request **Fire Department** if there is a fire or a release of flammable liquids;
- Request **Ambulance** if someone is injured;
- Request **Rescue Team** if someone is trapped.

4.5 Notification by Plant Security

The area's supervisors will contact Plant Security on extension 333 to report major chemical emergencies. Plant Security should take the following actions to request local emergency services, to notify plant personnel, and to notify the Emergency Coordinator and alternates:

- 1) **Plant Security dials 911 to request local emergency services. Give the following information:**
 - a) **TYPE** of emergency (chemical release with fire, etc.);
 - b) **WHAT CHEMICAL** is involved;
 - c) **REQUEST** local emergency services as requested by the plant person who called in the emergency. (Generally both "**haz-mat**" and **police** assistance will

be required for major chemical emergencies. Other options include **ambulance, rescue team, and fire trucks**).

AT AVENTINE RENEWABLE ENERGY, INC., A SECURITY GUARD WILL MEET THE POLICE AND FIRE DEPARTMENT HAZ-MAT VEHICLES AND DIRECT THEM TO THE EXACT LOCATION.

- 2) **Plant Security notifies the Emergency Coordinator and all of the Alternates on the Emergency Coordinators List.** Names, titles, and phone numbers (both plant and home) of personnel on the Emergency Coordinators list are listed in table 3 (see page 46).

- 3) **Plant Security will radio and telephone to notify plant personnel:**

a) **RADIO:** Channel 2, 4, & 5 to notify Area's supervisors.

(1) ALL UTILITIES ENGINEERS, MANAGERS AND COORDINATORS SHOULD RADIO BACK TO CONFIRM THAT THEY HAVE RECEIVED THE WARNING. ALL PLANT PERSONNEL NOT DIRECTLY INVOLVED IN THE EMERGENCY SHOULD CLEAR PLANT RADIO CHANNELS.

(2) Plant Security should use the checklist in figure 3 to account for area's supervisors. Rebroadcast the message several times.

(3) If an area's supervisor (or someone representing the area's supervisor) cannot be accounted for after broadcasting the warning several times, Plant Security should immediately alert the acting Emergency Coordinator. Tell the Emergency Coordinator which supervisor(s) may not have received the warning.

b) **TELEPHONE** (Monday – Friday):

(1) X 377 – Executive Office, Main Office, and Lab

(2) X 226 – Marketing and Traffic:

(3) X 236 – Engineering & Purchasing:

4.6 Assessment by Emergency Coordinator

After confirming that appropriate local emergency services have been notified (HazMat, Police, Fire & Rescue, or Ambulance), the Emergency Coordinator (or alternate) will assess the emergency for possible hazards to human health or the environment that may result from the release, fire, or explosion. The Emergency Coordinator, in conjunction with the Pekin Fire Department Incident Commander, will assess the release or chemical fire for appropriate response. The primary charge is to protect lives and prevent reaction or ignition of the spill or any flammable vapors generated from the spill, to prevent the spread of any fires to other areas, and to minimize the threat to personnel and the environment.

This assessment must consider the following:

- a) Type, amount, and variety of hazardous materials involved and an estimate of the release rate.

- b) Location of the hazardous material relative to sensitive or critical areas (such as public roadways, the sewer system, ignition sources, incompatible materials, onsite and offsite populations, etc.).
- c) Handling safety requirements (health and safety and compatibility considerations).
- d) During fires assist Pekin Fire Department in determining where it is appropriate to remove, cool, or isolate threatened chemical containers whose contents may contribute to the fire, react with extinguishing agents, or undergo heat-induced explosions.
- e) Possible hazards that may result from a release, fire, or explosion (e.g.: the effects of any toxic, irritating or asphyxiating gases that may be generated or the effects of any hazardous surface water run-off from water or chemical agents used to control fire and heat-induced explosions).
- f) The effects of weather conditions, especially wind direction and speed, for releases that are not contained in buildings, and ambient temperature (for flash point considerations and for response considerations), and atmospheric stability conditions.
- g) Identification of possible hazards to human health or the environments (both onsite and offsite) that may result from a release, fire, or explosion.
- h) The use of extinguishing agents in abating large fires may result in the release of contaminants outside facility buildings or containment areas.
Use sandbags or other materials to block storm sewer drains.
Use sandbags, absorbent materials, or trenching to contain any overflow of extinguishing agents.

The Emergency Coordinator should consider factors outlined above such as;

- Type and quantity of material involved;
- Release rate;
- Wind speed and direction;
- The location of the emergency;
- LEL boundaries and visibly affected areas;

To determine if the emergency has a potential to endanger the health or safety of onsite personnel or the offsite community surrounding the plant.

If the Emergency Coordinator (or alternate) determines that there is a threat to plant personnel, the Emergency Coordinator (or alternate) can order the evacuation of plant personnel.

If the Emergency Coordinator determines that there is an offsite threat to the health or safety of residents of the community surrounding the plant, the Emergency Coordinator (or his qualified designee) should immediately notify and coordinate with local emergency agencies (Police, Fire Department, and LEPC).

The Emergency Coordinator should work with the local police to assure the proper roads are blocked and other actions are taken to protect the community.

4.7 Onsite Evacuation Plan

The purpose of the evacuation plan is to insure a safe, orderly means of removing personnel from threatened areas at Aventine Renewable Energy, Inc. in the event of an emergency in which their remaining in those areas may endanger lives or health. The evacuation may be precautionary or may be based on actual impact to an area during an emergency. In the event it becomes necessary to evacuate the facility, these procedures shall be used as guidelines for action.

4.7.1 Implementation

- a) Supervisors will assess the location, type of emergency, and other factors (such as wind direction) when they initially receive notification of a major plant emergency (fire, explosion, or chemical release). At this time they may order evacuation of areas under their direction.
- b) Based on his/her assessment of the emergency, the Emergency Coordinator can order evacuation of specific buildings or specific plant areas. The Emergency Coordinator will notify supervisors through Security by two-way plant radio if an evacuation is deemed necessary.

4.7.2 Responsibilities for Utilities Engineers, Managers and Coordinators

Evacuation leaders are the areas' supervisors. Their duties include:

- a) Ensure that all exits are kept clear and usable at all times.
- b) Make an initial assessment based on wind direction and known information about emergency. If plant area could be impacted order evacuation.
- c) Insure that all persons under their direction are instructed to leave the facility by means of designated exits, and are instructed as to the designated assembly area.
- d) Determine what emergency shutdown procedures are appropriate. In the event of a precautionary evacuation, determine which employees should remain behind with proper protective equipment operate critical plant processes and to effect emergency shutdown of processes.
- e) Evacuate all employees from the department, including areas such as restrooms, break rooms, control rooms, etc.
- f) Insure all persons are accounted for by conducting a head count in a designated assembly area outside the building. *(If anyone is missing the area's supervisor should immediately report their name and where they were last seen to the Fire Department and Emergency Coordinator).*

At the assembly area, the Supervisor should account for all employees, know who is working on what job and where they are working. Sources available for accomplishing the above are: sight, telephone, radio and beepers to verify everyone's location.

- g) Insure that no persons re-enter the facility until it has been declared safe by the Fire Department and the acting Plant Emergency Coordinator.

4.7.3 Evacuation Procedures

- a) Supervisors are responsible for informing all affected employees of immediate danger and designating one of the three assembly areas outside the building/area (see page 30, Section 4.7.5, for a list of recommended assembly areas).
- b) When an evacuation is announced, all employees must leave the building/area by the quickest clear exit and report to the designated safe assembly area outside the building/area. If an evacuation route; or exit is blocked by chemical releases or fire, personnel from that area should exit on the other side of the building/area. Do not run. Do not linger in entranceways or driveways; assemble by work group in the designated safe assembly area so that a headcount can be taken.
- c) Once outside the area/building move crosswind to the designated assembly area, **never directly with or against the wind, which may be carrying fumes, smoke, vapors, etc.**
- d) Do not use two-way plant radios unless you are directly involved in the emergency. The plant radio system must be left open form issuing plant wide instructions.
- e) During precautionary evacuations, the area's supervisors will determine what employees should remain behind to complete emergency shutdown procedures or to operate critical plant processes. The area's supervisor must specifically determine whether it is safe for those employees to remain behind and must tell those employees that it is safe. Employees remaining behind must maintain two-way radio communication with their supervisor to determine any changes in status during the emergency.
- f) Supervisors will ensure that all persons are accounted for by conducting a headcount in a designated assembly area outside the building. If anyone is missing determine where he or she was last seen. ***(If anyone is missing, the area's supervisor should immediately report their name and where they were last seen to the Fire Department Incident Commander and the Plant Emergency Coordinator).***
- g) The Plant Emergency Coordinator will direct further action, as required. Employees **must not return to their work areas** until the Fire Department Incident Commander and the Plant Emergency Coordinator have declared the area to be safe.

4.7.4 Evacuation Routes, Exit Assignments

Floor diagrams in Attachment 3 show the best routes for each area to use when evacuating plant buildings.

All employees should leave the building by the nearest clear exit. If the route(s) is/are blocked by chemical releases or fires, personnel from that area should exit on the other side of the building. Once outside plant buildings, assemble for a head count by department and work group in the designated assembly area (see below).

4.7.5 Designated Assembly Areas

Note: Assembly areas will vary, depending upon the nature of the release/wind conditions of the day, and the magnitude of the release.

- 1) Suggested assembly areas are as follows:
 - a) The Employees' Parking Lot west of Security.
 - b) Area north of Bldg. 65 and near 43 Warehouse.
 - c) The vacant lot south of the plant across Distillery Road.
- 2) In the event the designated assembly area cannot be reached due to the nature of the emergency, supervisors shall instruct employees to proceed to an alternate area.

4.7.6 Emergency Evacuation Precautions

- a) Keep calm, think, avoid panic and confusion.
- b) Know all exit location; be sure you know the safest and quickest way out of all buildings.
- c) Do not lock office doors when vacating the facility. Supervisors and support personnel must have visual access to all areas to ensure that the facility is clear of personnel.
- d) Do not delay evacuation for any reason.
- e) Do not assist in fire control unless properly trained and qualified.
- f) Do not use two-way plant radios unless you are directly involved in the emergency. The plant radio system must be left open for issuing plant-wide instructions.
- g) When evacuating plant buildings walk to the nearest safe exit. Report to the safe assembly areas away from buildings, assemble by workgroup for a headcount, and wait for instructions.
- h) Keep out of the way, stay clear of the facility, and DO NOT interfere with emergency operations.
- i) Do not reenter the facility until instructed to do so by your supervisor.

4.7.7 Facility contact for Plan Information

Aventine Renewable Energy, Inc. employees or others who want further information or explanation of duties outlined in this plan may contact:

Steve B. Antonacci
Environmental Manager
(309) 347-9241
Plant Extension X241

Darin Osland
Environmental Specialist
(309) 347-9245
Plant Extension X245

Daryl Johnson
Environmental Specialist
(309) 347-9708
Plant Extension X708

4.8 Procedure for Notification of Local, State, and Federal Agencies

Local emergency response agencies (Pekin Police, Pekin Fire Department, etc.) will be notified of a release in accordance with the procedures outlined in the previous sections. Notification may also be required to the National Response Center (NRC), the State Emergency Response Commission (SERC, which is IEMA in Illinois), and any Local Emergency Planning Committees (LEPCs) in areas likely to be affected by the release. These notification procedures are outlined below.

Applicable regulations include:

- 29 IAC 430 Illinois "Emergency and Written Notification of an incident or Accident Involving a Reportable Hazardous Substance". Notification is required for non-exempt releases to the environment above an RQ of CERCLA hazardous substances and SARA extremely hazardous substances. Some situations where injuries or evacuation of the public occurs are also reportable (refer to the discussion in 4.8.5(c) below).
Notify: IEMA (SERC) and LEPC (notify any LEPC areas likely to be affected by the release (i.e. LEPC for Tazewell or Peoria Counties)).
- 40 CFR 355 SARA Title III "Emergency Planning and Notification". Notification is required for non-exempt releases to the environment above an RQ of CERCLA hazardous substances and SARA extremely hazardous substances.
Notify: SERC (IEMA) and LEPC (notify any LEPC areas likely to be affected by the release (i.e. LEPC for Tazewell or Peoria Counties)).
- 40 CFR 302 EPA Designation, Reportable Quantities, and Notification Requirements under CERCLA. Notification is required for non-exempt release to the environment above RQ of CERCLA hazardous substances.
Notify: NRC

41 IAC 170.590 Illinois "Reporting and Cleanup of Spills and Overfills".

Owners or operators of UST systems shall contain and immediately clean up a spill or overfill and report either release to Illinois Emergency Management Agency within 24 hours and begin initial response and initial abatement in accordance with Sections 170.600 and 170.610, in the following case: Spill or overfill of petroleum that results in a release to the environment that exceeds 25 gallons or that causes a sheen on nearby surface water.

4.8.1 Who Notifies

Steve Antonacci, Darin Osland, or Daryl Johnson will make the determination whether notification is required and if so will make the telephone notifications and follow up written notifications.

4.8.2 Responsibilities For Utilities Engineers, Coordinators and Managers

- a) Conduct initial screening to determine if the chemical or a constituent of the substance released has an RQ (refer to the list in Attachment 1 of chemicals used in the plant).
- b) Estimate the quantity released in pounds.
- c) Notify Steve Antonacci, Darin Osland, or Daryl Johnson (try in that order) for all chemical releases (regardless of size or severity). If a release is obviously below a reportable quantity for the chemical release, notify Steve, Darin, or Daryl by the next weekday morning, otherwise notify one of them as soon as practical after the release is discovered. (Note: during major chemical emergencies where security is notified at X333 of the emergency, Steve, Darin, Daryl will be notified by Plant Security).

4.8.3 Procedure for Determining Notification Requirements

1. Determine if the release is exempt from notification (see below).
2. Determine if the release is oil that has been released to navigable waters or adjoining shorelines (if so, report to NRC and IEMA, see 4.8.5(c) below for discussion); *or if the release meets the 41 IAC 170.590 requirements (spill or overfill of petroleum that results in a release to the environment that exceeds 25 gallons or that causes a sheen on nearby surface water.)*
3. Determine if the release has exceeded a reportable quantity:
 - a) For chemicals covered in the Chemical Safety Contingency Plan refer to the summary table in Attachment 1. This table includes RQ's, notes for adjusted RQ's (in gallons) for various wt% solutions used in the plant, and an indication of what regulations require immediate notification for any given chemical. Attachment 1 also includes an individual page summarizing the reporting requirements and applicable immediate notification telephone numbers for each hazardous chemical addressed in the Chemical Safety Contingency Plan.

- b) If the chemical is not listed in Attachment 1, refer to the MSDS and 40 CFR 302.4 and 40 CFR 355 to determine if it has a reportable quantity.
4. Determine if the substance is a DOT hazardous material and if one of the conditions in 4.8.5(c) below has occurred. If so, report to IEMA. (Note: All of the hazardous chemicals addressed in this plan are also DOT hazardous materials).
5. If none of the above applies, determine if the substance is an unlisted substance with any of the RCRQ hazardous waste characteristics. Substances with ICR characteristics have a reportable quantity of 100 lbs. (Note: Substances may not be considered wastes and therefore exempt if they are immediately cleaned up for reuse, repackaging, reprocessing, or recycling, see discussion in 4.8.8 below).
6. Determine any follow up written requirements.

4.8.4 Telephone Notification Numbers

SERC/IEMA:

Illinois Emergency Management Agency (formerly IESDA). IEMA is also designated as the State Emergency Response Commission (SERC).
(217) 782-7860 or (800) 782-7860

LEPCs (notification is required to any LEPC areas likely to be affected by a release):

Mr. Bill Nowlin – ESDA Director (Emergency Services Disaster Agency)

Any Emergency Call should be placed to:

Pekin Fire Department - 911

Non-Emergency: (exempt releases or releases not requiring assistance)

Pekin Fire Department - (309) 477-2388 (Fire Chief Office)
(309) 613-0283 (Fire Chief Cell)
(309) 477-2303 (Shift Commander Office)
(309) 241-6263 (Shift Commander Cell)

Mr. Bill Nowlin – ESDA Director (Emergency Services Disaster Agency)
334 Elizabeth Street, Ste. 200, Pekin, Illinois 61554 Office: (309) 477-2234
Cell: (309) 397-1205

Ms. Vicky Turner, Chair, Peoria County Emergency

10321 Civil Defense Road, Brimfield, Illinois

(309) 691-3111

NRC:

National Response Center (Operated by the U.S. Coast Guard):
(800) 424-8802

4.8.5 General

- a) Non-exempt releases to the environment above a reportable quantity of CERCLA Hazardous Substances and SARA extremely hazardous

substances require immediate telephone notification and follow up written notification.

- b) Reportable quantities (RQs) vary, depending on the specific chemical that was released. The reportable quantity is for a pure substance. In mixtures and solutions (for example, 50-wt% Caustic) the RQ applies only to the weight of the constituent for which the RQ was established.
- c) The Illinois rules for emergency and written notification (29 IAC 430) also require immediate emergency notification to IEMA for releases of DOT designated hazardous materials under the following circumstances:
 - 1. A member of the general public is killed or receives injuries requiring hospitalization;
 - 2. An authorized official of an emergency agency recommends evacuation of an area by the general public;
 - 3. A motor vehicle has overturned on a public highway;
 - 4. Fire, breakage, release or suspected contamination occurs involving an etiologic agent;
 - 5. Any release of oil which meets the reporting requirements in the U.S. EPA regulations in 40 CFR 110 (releases of oil to navigable waters or adjoining shorelines that violate water quality standards, causes a film or discoloration on surface water, causes a sludge or emulsion to be deposited); *or if the release meets the 41 IAC 170.590 requirements (spill or overfill of petroleum that results in a release to the environment that exceeds 25 gallons or that causes a sheen on nearby surface water.)*
 - 6. A container of a hazardous material has been damaged to the point of showing physical evidence of a release and this release is likely to occur of such magnitude that one of the above criteria would likely be met.
- d) The person in charge of a facility; once he or she knows of a non-exempt release above an RQ, where the release exceeded the RQ within a 24-hour period, must immediately make the required notifications.

4.8.6 What Constitutes a Release to the Environment

The April 4, 1985 Federal Register preamble to the final CERCLA notification rule includes a discussion of what constitutes a release. This discussion is applicable also to the Illinois Rules for telephone and Written Notification and the SARA definition of a release. The relevant section of this discussion follows:

"Hazardous substances may be released "into the environment" even if they remain on plant or installation grounds. Examples of such releases are spills from tanks or valves onto concrete pads or into lined ditches open to the outside air, releases from pipes into open lagoons or ponds, or any other discharges that are not wholly contained within buildings or structures. Such a release, if it occurs in a reportable quantity (e.g., evaporation of an RQ into the air from a dike or concrete pad), must be reported under CERCLA. On the other hand, hazardous substances may be spilled at a plant or installation but not enter the environment, i.e., when the substance spills onto the concrete floor of an

enclosed manufacturing plant. Such a spill would need to be reported only if the substance were in some way to leave the building or structure in a reportable quantity.”(50 FR 13462).

4.8.7 What Releases are Exempt from Notification

Certain types of releases are exempt from immediate notification requirements. These include:

IESDA (29 IAC 430.60) EXEMPTIONS

Any release, which results in exposure to persons solely within the site or sites on which a facility is located;

Any release, which is a “federally permitted release” as, defined in section 101(10) of CERCLA;

Any release exempt from CERCLA Section 103(a) reporting under 101(10) of CERCLA;

The normal application of fertilizer;

SARA (40 CFR 355.40) EXEMPTIONS

Any release, which results in exposure to persons solely within the boundaries of the facility;

Any release, which is a “federally permitted release” as, defined in section 101(10) of CERCLA;

Any release which is “continuous” as defined under section 103(f) of CERCLA, provided that initial notification is made (except for statistically significant increases” as defined under section 103 of CERCLA);

Any radionuclide release, which occurs from the dumping of coal and coal ash at utility and industrial facilities with coal-fired boilers, and from coal and coal ash piles at those facilities;

Any release exempt from CERCLA Section 103(a) reporting under 101(10) of CERCLA.

CERCLA (40 CFR 302) EXEMPTIONS:

Federally permitted release such as permitted air emissions;

Continuous releases as defined 40 CFR 302.8(b) (provided that any initial and periodic notifications are made).

Releases of a pesticide being applied in compliance with FIFRA registration and labeling requirements. This exemption does not include accidental spills or other releases of pesticides.

Any radionuclide release, which occurs from the dumping of coal and coal ash at utility and industrial facilities with coal-fired boilers, and from coal and coal ash piles at those facilities;

CERCLA HAZARDOUS SUBSTANCE EXCLUSIONS

Congress specifically excluded certain substances from CERCLA release reporting requirements. These substances include petroleum, including crude oil or any fraction thereof unless specifically listed as a hazardous substance; natural gas, natural gas liquids, liquefied natural gas; and synthetic gas usable for fuel. EPA interprets the CERCLA petroleum exclusion to apply to materials such as crude oil, petroleum feed stocks, and refined petroleum products, even if a hazardous substance such as benzene, is a natural contaminant or is normally mixed with or added to them during refining.

SARA does not incorporate this CERCLA exclusion for immediate release notification so reporting may be required to the SERC and LEPC under SARA even though it is not required to the NRC under CERCLA.

Notification may also be required under 41 IAC 170.590 of a release of a petroleum product to the environment in excess of 25 gallons.

4.8.8 What About Non-Designated Substances with Hazardous Characteristics

CERCLA includes in the definition of hazardous substances "any hazardous waste having the characteristics identified or listed pursuant to section 3001 of the Solid Waste Disposal Act...". Solid wastes, as defined by RCRA, which exhibit one or more of the four RCRA hazardous waste characteristics are considered CERCLA hazardous substances and have RQ's listed under "unlisted hazardous wastes characteristic of ..." in 40 CFR 302.4. The four RCRA hazardous waste characteristics include:

- 1) **Ignitability** (closed cup flash point of less than 140° F),
- 2) **Corrosivity** (pH <2 or >12.5),
- 3) **Reactivity** (reacts violently with water or when mixed with water generates toxic gases/vapors/fumes, etc. (see 40 CFR 261.23), or;
- 4) **TCLP Toxicity** (40 CFR 261.24)

The first three characteristics are generally referred to as ICR wastes. The obligation to report releases to the environment of substances exhibiting RCRA ICR characteristics is clarified in the Thursday, April 4, 1985 Federal Register (50 FR 13460). On page 13460 EPA states that a ...

"...release of a non-designated substance exhibiting an ICR characteristic is the release of a hazardous substance only if the substance is a waste. If a non-designated ICR substance is spilled and immediately cleaned up for repackaging, reprocessing, recycling, or reuse, it is not a waste and the spill need not be reported (see 45 FR 78450, 11/25/80). However, if the substance is not cleaned up, or is cleaned up for eventual disposal, it is then a waste (and thus a hazardous substance) which has been released to the environment and must be reported if it exceeds the RQ."

4.8.9 What are the Reportable Quantities for Chemicals Used in the Plant

Attachment 1 includes a list of chemicals used in the plant, which have reportable quantities. This list also includes adjusted RQ's in gallons for most solutions used (i.e.: 50 wt% caustic, 5 wt% caustic, etc.). If a chemical, which is released, is not on this list, an Aventine Renewable Energy Environmental Specialist or similarly trained person will verify that it does not have a reportable quantity and that it does not exhibit RCRA hazardous waste characteristics.

4.9 Coordination of Emergency Services

[Illinois Chemical Safety Act, P.A. 84-852, Section 5(a)(2)]

[29 Illinois Administrative Code 610.40]

In the event of an emergency Aventine Renewable Energy, Inc. will be required to coordinate emergency actions with the Pekin Fire Department (Engine and Truck Companies, HazMat, and Rescue Teams), Pekin Police Department, Campbell-Superior Ambulance Company, Pekin Hospital, and possibly the Tazewell County Local Emergency Planning Committee (LEPC).

As required b 29 IAC 610.40, Aventine Renewable Energy, Inc. will request in writing an annual meeting with representatives of each of the above agencies to discuss current emergency response functions, and update all affected entities on the chemical emergency preparedness activities undertaken by both public and private sectors over the course of the previous year. 29 IAC 610.40 specifies that the annual meeting should address:

- 1) Any changes in the facility's chemical safety contingency plan;
- 2) The rationale for listing and non-listing of chemical substances contained in the plan, including a review of why any substance is expected to be innocuous under the circumstances of its release;
- 3) Changes in the facility emergency system operations or response capabilities;
- 4) A review of any incidents of the previous year which resulted in a significant release;
- 5) A discussion of the local geographical jurisdiction's chemical safety emergency planning and response activities, and how the industry and community may assist each other in their chemical safety preparedness efforts.

As a preplanning coordination step, Aventine Renewable Energy, Inc. has supplied the following information to local emergency response and planning agencies:

1) PEKIN POLICE DEPARTMENT:

400 Margaret Street

Pekin, IL 61554

(Contact: Tim Gillespi, Police Chief or Dispatcher)(309) 346-3132

Selected sections of Aventine Renewable Energy, Inc. Chemical Safety Contingency Plan, including:

- (a) Aventine Renewable Energy, Inc. Chemical Safety Contingency Plan.
- (b) Material Safety Data Sheets for chemicals addressed in the Plan.

2) ADVANCED MEDICAL TRANSPORT OF CENTRAL ILLINIOS:

Advanced Medical Transport of Central Illinois (Peoria Based)
418 Elizabeth Street
P.O. Box 578
Pekin, IL 61555-0578
(Contact: Mr. Rex Comerford, (309) 494-6200 or (309) 347-6611)

Selected sections of Aventine Renewable Energy, Inc. Chemical Safety
Contingency Plan, including:

- (a) Table summarizing information on Hazardous Chemicals at the Plant.
- (b) Map of hazardous chemical storage locations in the Plant.
- (c) Material Safety Data Sheets for chemicals addressed in the Plan.

3) PEKIN HOSPITAL

600 South 13th Street
Pekin, IL 61554
(Contact: Mr. Kirk DeFrates, Safety Chairman (309) 353-0466)

If the Safety Chairman cannot be contacted, call (309) 347-1151 and have the operator page either one of the Safety Chairmen.

Selected sections of Aventine Renewable Energy, Inc. Chemical Safety
Contingency Plan, including:

- (a) Table summarizing MSDS information on routes of exposure and symptoms of acute exposure to chemicals addressed in Aventine Renewable Energy, Inc. Chemical Safety Contingency Plan. (This table is included as attachment 3 to this plan).
- (b) Material Safety Data Sheets for chemicals addressed in the Plan.

4) TAZEWELL COUNTY EMERGENCY PLANNING COMMITTEE:

Bill Nowlin – Chair, Tazewell County LEPC
Any emergency call should be placed to:
Pekin Fire Department - 911
334 Elizabeth Street, Ste. 50-OPO, Pekin, Illinois 61554 (309) 477-2272
119 Hires Trace, Morton, Illinois 61550: (309) 266-5034

Selected sections of Aventine Renewable Energy, Inc. Chemical Safety
Contingency Plan, including:

- (a) Aventine Renewable Energy, Inc. Chemical Safety Contingency Plan.
- (b) Material Safety Data Sheets for chemicals addressed in the Plan.

5) PEKIN FIRE DEPARTMENT:

3232 Court Street
Pekin, IL 61554
(Contact: Chief Chuck Lauss or Shift Commander)

- Office (309) 477-2388
 - Cell (309) 613-0283
- Emergency:
- 911 - (Fire and Non-exempt releases)
- Non-Emergency:

- (309) 477-2303 (Shift Commander Office)
- (309) 613-0285 (Shift Commander Cell)
(Exempt releases or releases not requiring assistance)

Selected sections of Aventine Renewable Energy, Inc. Chemical Safety Contingency Plan, including:

- (a) Aventine Renewable Energy, Inc. Chemical Safety Contingency Plan.
- (b) Material Safety Data Sheets for Chemicals addressed in the Plan.

In addition, representatives of the Pekin Fire Department periodically tour the plant and review fire protection systems (typically twice annually), and may conduct simulated exercise (overturned tanker, etc.). Members of the Pekin Fire Department have been sent to the Texas A&M Industrial Fire School to be trained in fighting alcohol and gasoline fires, as well as gaining a working knowledge of our foam systems at the alcohol loading area, tank farm area, and pump areas.

5.0 Emergency Coordinators

[Illinois Chemical Safety Act, P.A. 84-852, Section 4(b)(4)]

The names, titles, address, and phone numbers (office and home) of all personnel qualified to act as the Emergency Coordinator are listed in Table 2. Table 2 identifies the primary Emergency Coordinator and identifies alternates listed in the order in which they will assume responsibility. Table 2 is also the primary call list for major emergencies. Plant Security will attempt to contact all personnel listed in Table 2.

The Emergency Coordinator (or alternate) is authorized to commit the resources needed to carry out the contingency plan including, but not limited to, ordering the shut-down of any plant operation, ordering the evacuation of any plant areas, expending funds, and recruiting employees as needed to implement the plan.

The primary responsibility of the Emergency Coordinator is to coordinate all emergency actions taken by Aventine Renewable Energy, Inc. based upon information reported by the discoverer or area supervisor, the Emergency Coordinator (or an alternate) shall immediately identify the nature of the event (i.e., release, fire, explosion) and assess the emergency for possible hazards to human health or the environment.

Summary of Emergency Coordinator's Responsibilities

1. Upon arriving at the scene verify that Police, HazMat, and any other local response agencies needed have been notified.
2. Take overall responsibility for coordinating all emergency actions of Aventine Renewable Energy, Inc. Coordinate and work closely with local emergency response agencies.
3. Immediately identify the character, exact source, amount, and aerial extent of any released materials. Concurrently, assess possible hazards to human health or the environment that may result from the release, fire or explosion.
4. Ensure that facility personnel are notified, as appropriate to the situation.
5. If a release, fire, or explosion could threaten human health or the environment outside the facility; coordinate closely with appropriate authorities and give them details on the incident and any other necessary assistance.
6. Take all reasonable measures to ensure that fires, explosions and releases do not occur, recur, or spread. These measures must include, where applicable, stopping processes and operations, collecting and containing released chemicals, and removing or isolating containers.
7. Ensure that monitoring for leaks, pressure buildup, gas generation, and ruptures in valves, pipes or equipment are conducted, if appropriate, whenever facility operations are stopped in response to fire, explosion, or release.
8. Provide for proper treatment, storage, or disposal of recovered waste, contaminated soil or surface water, or any other material immediately after the emergency.

9. Ensure that, in affected areas, no materials that may be incompatible with any release material are stored or used until cleanup procedures are completed.
 10. Ensure that all emergency equipment is cleaned and fit for its intended use before operations are resumed in affected areas. This would include recharging or replacing portable fire extinguishers and resetting fire protection systems.
-

IMMEDIATE RELEASE NOTIFICATION REQUIREMENTS – RQ SUBSTANCES

CAS #	CHEMICAL NAME	RQ ¹ (LBS)	NOTE: Adjusted RQ's for Solutions ² , etc.	SARA EHS?	CERCLA 40 CFR 302	SARA 40 CFR 355	IEMA 29 IAC 430
1336-21-6	Ammonium Hydroxide ^{1,3} (Aqua Ammonia)	1000	1000 lbs 12 wt %: RQ 1093 gallons = $\frac{1000 \text{ lbs}}{0.914 \text{ SpG} \times \text{CF} \times [\%]}$	NO	Y	Y	Y
7664-41-7	Anhydrous Ammonia	100	100 lbs 99.6 wt% RQ 18 gallons = $\frac{100 \text{ lbs}}{(0.6818 \text{ SpG})(\text{CF})(.996) \times [\%]}$	Y	Y	Y	Y
7758-98-7	Copper Sulfate ¹ (MET SOURCE AN)	10	10 lbs. .67wt%: RQ 164 gallons = $\frac{10 \text{ lbs.}}{(1.09)(8.34)(.0067) \times [\%]}$	NO	Y	NO	Y
7718-54-9	Nickel Chloride ^{1,5} (Met Source AN)	100	100 lbs 1.3 wt%: RQ 846 gallons = $\frac{100 \text{ lbs}}{(1.09)(8.34)(.013) \times [\%]}$	NO	Y	NO	Y
1310-58-3	Potassium Hydroxide	1000	1000 45 wt%: RQ 184 gallons = $\frac{1000}{(1.45)(8.34)(.45) \times [\%]}$	NO	Y	NO	Y
7681-52-9	Sodium Hypochlorite ^{1,3}	100	100 lbs 14.5 wt %: RQ 67 gallons = $\frac{100 \text{ lbs}}{1.23 \text{ SpG} \times \text{CF} \times [\%]}$	NO	Y	Y	Y
64-17-5	Ethanol ^{3,4}	N/A	N/A	NO	NO	NO	NO
108-91-8	Cyclohexylamine ^{1,3,5} (Steamate NA0560)	10000	10000 lbs 29.9 wt %: RQ 4060 gallons = $\frac{10000 \text{ lbs}}{0.988 \text{ SpG} \times \text{CF} \times [\%]}$	Y	Y	Y	Y
8008-20-6	Fuel Oil	100	100 lbs RQ 18 gallons = $\frac{100 \text{ lbs}}{0.65 \text{ SpG} \times \text{CF} \times [\%]}$	NO	NO	NO	Y
68425-31-0	Liquid Natural Gasoline ^{3,4}	100	100 lbs RQ 20 gallons = $\frac{100 \text{ lbs}}{0.6 \text{ SpG (avg)} \times \text{CF} \times [\%]}$	NO	NO	NO	Y
68410-71-9	Naphtha ^{3,4}	100	100 lbs RQ 17 gallons = $\frac{100 \text{ lbs}}{0.71 \text{ SpG} \times \text{CF} \times [\%]}$	NO	NO	NO	Y
8006-61-9	Unleaded Gasoline ^{3,4}	100	100 lbs RQ 16 gallons = $\frac{100 \text{ lbs}}{0.735 \text{ SpG} \times \text{CF} \times [\%]}$	NO	NO	NO	Y
7664-38-2	Phosphoric Acid ^{1,3}	5000	5000 lbs 70 wt %: RQ 563 gallons = $\frac{5000 \text{ lbs}}{1.52 \text{ SpG} \times \text{CF} \times [\%]}$	NO	Y	Y	Y
1310-73-2	Sodium Hydroxide ^{1,3}	1000	1000 lbs 50 wt %: RQ 157 gallons = $\frac{1000 \text{ lbs}}{1.53 \text{ SpG} \times \text{CF} \times [\%]}$ 1000 lbs 21.5 wt %: RQ 450 gallons = $\frac{1000 \text{ lbs}}{1.24 \text{ SpG} \times \text{CF} \times [\%]}$ 1000 lbs 11.8 wt %: RQ 899 gallons = $\frac{1000 \text{ lbs}}{1.13 \text{ SpG} \times \text{CF} \times [\%]}$ 1000 lbs 5 wt %: RQ 2284 gallons = $\frac{1000 \text{ lbs}}{1.05 \text{ SpG} \times \text{CF} \times [\%]}$	NO	Y	Y	Y
7664-93-9	Sulfuric Acid ¹	1000	1000 93.19 wt%: RQ 70.12 gallons = $\frac{1000}{(1.835 \text{ SpG})(8.34)(.9319) \times [\%]}$	Y	Y	Y	Y
1330-20-7	Xylene ¹ Corrosion Inhibitors OCTEL DC-11 (≈ 5%) Tolad (≈ 3.1%)	1000	1000 lbs 5 wt %: RQ 2579 gallons = $\frac{1000 \text{ lbs}}{0.93 \text{ SpG} \times \text{CF} \times [\%]}$ 1000 lbs 3.1 wt %: RQ 4250 gallons = $\frac{1000 \text{ lbs}}{0.94 \text{ SpG} \times \text{CF} \times [\%]}$	NO	Y	Y	Y

¹ The reportable quantity (RQ) listed is for a pure substance. If the material released is a mixture or solution, determine if the amount of the designated substance or component released exceeds the RQ. If the quantity of the designated substance or component in the mixture/solution is not known then notify if the total amount of the mixture or solution released equals or exceeds the RQ and the release is not otherwise exempt from reporting. Reportable releases include releases to the environment above an RQ, which are not wholly contained within buildings or structures or exempt from notification. Outdoor releases, which are contained on concrete inside diking or on a concrete pad, may be reportable if evaporation of an RQ into the air occurs. Releases are generally exempt from notification to the SERC and LEPC under SARA and IEMA regulations if they result in exposure to persons solely within the boundaries of the facility (SARA) or solely within the site or sites on which the facility is located (IEMA).

² The relationships of degrees Baumé ("Bé) to specific gravity or density (inches gm/cm³) at 60/60 F° are:

³ These substances are also DOT hazardous materials. Immediate release notification to IEMA is required under 29 IAC 430.30 if:

1. A member of the general public is killed or receives injuries requiring hospitalization,
2. Authorized official of an emergency agency recommends evacuation of an area by the general public,
3. A container or vessel has been damaged to a point where one of the above may occur.

⁴ These substances are not specifically designated as CERCLA hazardous substances or SARA EHS. They are included here as reportable hazardous substances based on the interpretation that they may be "unlisted hazardous wastes with the characteristic of ignitability" (RCRA ignitability definition: Flash point < 140 F° (60 C°)) when released to the environment. (See table 302.4 in 30 CFR 302). They are not considered wastes if they are immediately cleaned up for reuse, repackaging, reprocessing, or recycling (50 FR 13462).

⁵ The volumes currently stored at this facility are such that a total loss of storage volumes (in use) will not meet the RQ of the substance and are not subject as reportable. Copper Sulfate and Nickel Chloride (ingredients of MET SOURCE AN) would be subject to reportable guidelines under a worse case scenario where all 4 containers (average) on site would be compromised and a total loss of each volume is realized.

CAS NUMBER: 1310-73-2

$$50 \text{ wt\%: RQ } 157 \text{ gallons} = \frac{1000 \text{ lbs}}{1.53 \text{ SpG} \times 8.34 \times .50}$$

$$21.5 \text{ wt\%}: RQ \quad 450 = \frac{1000 \text{ lbs}}{1.24 \text{ SpG} \times 8.34 \times .215}$$

$$11.8 \text{ wt\% : RQ } 899 \text{ gallons} = \frac{1000 \text{ lbs}}{1.13 \text{ SpGr} \times 8.34 \times 118}$$

$$5 \text{ wt\% : } RQ \quad 2284 = \frac{1000 \text{ lbs}}{1.05 \text{ SpG} \times 8.34 \times 0.5}$$

	IEMA*	SARA*	CERCLA
	29 CFR 430	40 CFR 355	40 CFR 302
NOTIFY:	(IEMA & LEPC)	(IEMA & LEPC)	(NRC)

1. Under IEMA regulations, to any release that results in exposure to persons solely within the site or sites on which a facility is located (29 IAC 430.60(a)).
2. Under SARA regulations, to any release which results in exposure to persons solely within the boundaries of the facility (40 CFR 355.40 (a)(2)(I)).
3. See 29 IAC 430.60, 40 CFR 355.40, and 40 CFR 302 for other exempt releases.

IEMA/SERC: Illinois Emergency Management Agency (formerly IESDA). IEMA is also designated as the State Emergency Response Commission (SERC):
(217) 782-7860 or (800) 782-7860

334 Elizabeth Street, Ste. 200, Pekin, Illinois 61554 office: (309) 477-2234
cell: (309) 397-1205

Box 10321 Civil Defense Road, Brimfield, Illinois (309) 691-3111

NRC: National Response Center (operated by the U.S. Coast Guard):
(800) 424-8802

1. The reportable quantity (RQ) listed is for a pure substance. If the material released is a mixture or solution determine if the amount of the designated substance or component released exceeds the RQ. If the quantity of the designated substance or component in the mixture/solution is not known, then notify if the total amount of the mixture or solution released equals or exceeds the RQ and the release is not otherwise exempt from reporting. Reportable releases include releases to the environment above an RQ, which are not wholly contained within buildings or structures or exempt from notification. Outdoor releases, which are contained on concrete inside diking or on a concrete pad, may be reportable if evaporation of an RQ into the air occurs. Releases are generally exempt from notification to the SERC and LEPC under SARA and IEMA regulations if they result in exposure to persons solely within the boundaries of the facility (SARA) or solely within the site or sites on which the facility is located (IEMA).

2. The relationships of degrees Baumé (°Bé) to specific gravity or density (inches gm/cm^3) at 60/60 F° are:

$$SpG \frac{145}{145 \text{ Re}} \text{ For liquids heavier than water.}$$

$$SpG \frac{140}{Be \ 130} \text{ For liquids lighter than water.}$$

3. This substance is also a DOT hazardous material. Immediate release notification to IEMA is required under 29 IAC 430.30 if:
- A member of the general public is killed or receives injuries requiring hospitalization,
 - An authorized official of an emergency agency recommends evacuation of an area by the general public, or,
 - A container or vessel has been damaged to a point where one of the above may occur.

Attachment #3

FROM CORPORATION TRUST WILM. TEAM #2

(FRI) 12.16'05 17:50/ST. 17:47/NO. 4863796820 P 7

Delaware

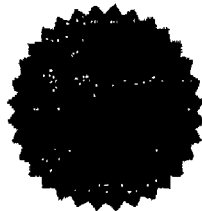
PAGE 1

The First State

I, HARRIET SMITH WINDSOR, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED ARE TRUE AND CORRECT COPIES OF ALL DOCUMENTS FILED FROM AND INCLUDING THE RESTATED CERTIFICATE OR A MERGER WITH A RESTATED CERTIFICATE ATTACHED OF "AVENTINE RENEWABLE ENERGY, INC." AS RECEIVED AND FILED IN THIS OFFICE.

THE FOLLOWING DOCUMENTS HAVE BEEN CERTIFIED:

RESTATED CERTIFICATE, CHANGING ITS NAME FROM "WILLIAMS ETHANOL SERVICES, INC." TO "AVENTINE RENEWABLE ENERGY, INC.", FILED THE THIRTIETH DAY OF MAY, A.D. 2003, AT 5:12 O'CLOCK P.M.



2505911 8100X

051031758

Harriet Smith Windsor

Harriet Smith Windsor, Secretary of State

AUTHENTICATION: 4381263

DATE: 12-16-05

Division of Corporations
Delivered 05:11 PM 05/30/2003
FILED 05:12 PM 05/30/2003
SRV 030359397 - 2505911 FILE

**AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION**

OF

WILLIAMS ETHANOL SERVICES, INC.

Williams Ethanol Services, Inc. (the "Corporation"), a corporation organized and existing under the laws of the State of Delaware, does hereby certify as follows:

1. (a) The present name of the Corporation is Williams Ethanol Services, Inc.;

(b) The name under which the Corporation was originally incorporated is Williams Ethanol Services, Inc., and the date of filing the original Certificate of Incorporation of the Corporation with the Secretary of State of the State of Delaware is May 10, 1995;

2. The Board of Directors of the Corporation duly adopted resolutions proposing to amend and restate the Certificate of Incorporation of the Corporation, and thereafter, pursuant to such resolutions of the Board of Directors of the Corporation, a consent was signed by the sole stockholder of the Corporation; and

3. This Amended and Restated Certificate of Incorporation has been duly adopted in accordance with the applicable provisions of Sections 228, 242 and 245 of the General Corporation Law of the State of Delaware.

The Certificate of Incorporation of the Corporation is hereby amended and restated to read in its entirety as follows:

FIRST: The name of the Corporation is Aventine Renewable Energy, Inc.

SECOND: The address of the Corporation's registered office in the State of Delaware is Corporation Trust Center, 1209 Orange Street, City of Wilmington, County of New Castle, Delaware 19801. The name of its registered agent at such address is The Corporation Trust Company.

THIRD: The purpose of the Corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation

Law of the State of Delaware as the same exists or may hereafter be amended ("Delaware Law").

FOURTH: The total number of shares of stock which the Corporation shall have authority to issue is 1,000, and the par value of each such share is \$1.00 (the "Common Stock").

FIFTH: The management of the Corporation shall vest in the Board of Directors, subject to Section 3.01 of the bylaws of the Corporation.

SIXTH: (1) Meetings of stockholders may be held within or without the State of Delaware, as the bylaws may provide.

(2) Stockholders may act by written consent in lieu of meeting pursuant to Section 228 of Delaware Law.

SEVENTH: In furtherance and not in limitation of the powers conferred by the laws of the State of Delaware:

(1) The Board of Directors shall have the power to adopt, amend or repeal the bylaws of the Corporation, subject to and in compliance with the terms of such bylaws.

(2) The books of the Corporation may be kept at such place within or without the State of Delaware as the bylaws of the Corporation may provide or as may be designated from time to time by the Board of Directors.

(3) Elections of directors need not be written by ballot unless the bylaws of the Corporation shall so provide.

EIGHTH: The Corporation expressly elects not to be governed by Section 203 of Delaware Law.

NINTH: (1) A director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director to the fullest extent permitted by Delaware Law.

(2)(a) Each person (and the heirs, executors or administrators of such person) who was or is a party or is threatened to be made a party to, or is involved in any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that such person is or was a director or officer of the Corporation or is or was serving at the request of the Corporation as a director or officer of another corporation, partnership, joint venture, trust or other enterprise (each, an "Indemnified Person"), shall be indemnified and held harmless by the Corporation to the fullest extent permitted by Delaware Law, except as may otherwise be provided in any written agreement between such Indemnified Person and the Corporation. The right to indemnification conferred in this ARTICLE NINTH shall also include the right to

be paid by the Corporation the expenses incurred in connection with any such proceeding in advance of its final disposition to the fullest extent authorized by Delaware Law. The right to indemnification conferred in this ARTICLE NINTH shall be a contract right.

(b) The Corporation may, by action of its Board of Directors, provide indemnification to such of the employees and agents of the Corporation to such extent and to such effect as the Board of Directors shall determine to be appropriate and authorized by Delaware Law.

(3) The Corporation shall have power to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the Corporation, or is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any expense, liability or loss incurred by such person in any such capacity or arising out of such person's status as such, whether or not the Corporation would have the power to indemnify such person against such liability under Delaware Law.

(4) The rights and authority conferred in this ARTICLE NINTH shall not be exclusive of any other right which any person may otherwise have or hereafter acquire.

(5) Neither the amendment nor repeal of this ARTICLE NINTH, nor the adoption of any provision of this Certificate of Incorporation or the bylaws of the Corporation, nor, to the fullest extent permitted by Delaware Law, any modification of law, shall eliminate or reduce the effect of this ARTICLE NINTH in respect of any acts or omissions occurring prior to such amendment, repeal, adoption or modification.

TENTH: The Corporation, subject to and in compliance with the above ARTICLE NINTH, reserves the right to amend this Amended and Restated Certificate of Incorporation in any manner permitted by Delaware Law and all rights and powers conferred herein on stockholders, directors and officers, if any, are subject to this reserved power.

ELEVENTH: Notwithstanding any provision herein to the contrary, in connection with any acquisition of Common Stock (and/or any other voting securities of the Corporation) as to which the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended (the "HSR Act"), would, but for this paragraph, be applicable, any person or entity (as defined under the HSR Act) acquiring such Common Stock (and/or other voting securities of the Corporation) shall have no right to vote such Common Stock or voting securities until such person or entity has complied with the filing and waiting period requirements of the HSR Act.

FROM CORPORATION TRUST, WILM. TEAM #2

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IN WITNESS WHEREOF, the undersigned has caused this Certificate to
be duly executed in its corporate name by its duly authorized officer.

Dated: May 30, 2003

WILLIAMS ETHANOL SERVICES, INC.

By: /s/ Ronald H. Miller

Name Ronald H. Miller

c:

Title President

Attachment #4

Delaware

PAGE 1

The First State

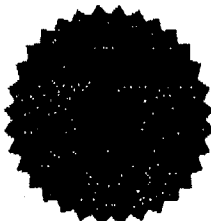
I, HARRIET SMITH WINDSOR, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED ARE TRUE AND CORRECT COPIES OF ALL DOCUMENTS FILED FROM AND INCLUDING THE RESTATED CERTIFICATE OR A MERGER WITH A RESTATED CERTIFICATE ATTACHED OF "AVENTINE RENEWABLE ENERGY, LLC" AS RECEIVED AND FILED IN THIS OFFICE.

THE FOLLOWING DOCUMENTS HAVE BEEN CERTIFIED:

RESTATED CERTIFICATE, CHANGING ITS NAME FROM "WILLIAMS BIO-ENERGY, LLC" TO "AVENTINE RENEWABLE ENERGY, LLC", FILED THE THIRTIETH DAY OF MAY, A.D. 2003, AT 5:11 O'CLOCK P.M.

3334328 8100X

051031750



Harriet Smith Windsor

Harriet Smith Windsor, Secretary of State

AUTHENTICATION: 4381256

DATE: 12-16-05

**AMENDED AND RESTATED
CERTIFICATE OF FORMATION
OF
WILLIAMS BIO-ENERGY, LLC**

Williams Bio-Energy, LLC (the "Company"), a limited liability company organized and existing under the laws of the State of Delaware, does hereby certify as follows:

1. (a) The name of the Company is Williams Bio-Energy, LLC.

(b) The name under which the Company was originally formed is Williams Bio-Energy, LLC, and the date of filing of the original Certificate of Formation of the Company with the Secretary of State of the State of Delaware is December 21, 2000.

2. This Amended and Restated Certificate of Formation is being duly executed and filed by Aventine Renewable Energy Holdings, Inc., in accordance with the applicable provisions of Section 18-208 of the Delaware Limited Liability Company Act.

3. The Certificate of Formation of the Company is hereby amended and restated to read in its entirety as follows:

FIRST: The name of the limited liability company is Aventine Renewable Energy, LLC.

SECOND: The address of the Company's registered office in the State of Delaware is Corporation Trust Center, 1209 Orange Street, City of Wilmington, County of New Castle, Delaware 19801. The name of the Company's registered agent at such address is The Corporation Trust Company.

IN WITNESS WHEREOF, the undersigned has executed this Amended
and Restated Certificate of Formation as of May 30, 2003.

WILLIAMS BIO-ENERGY, LLC

By: /s/ Ronald H. Miller
Name Ronald H. Miller
Title: President

Attachment #5

AMENDED AND RESTATED
OPERATING AGREEMENT
OF

AVENTINE RENEWABLE ENERGY, LLC

THIS OPERATING AGREEMENT dated as of the 30th day of May, 2003, is made by Aventine Renewable Energy Holdings, Inc., a Delaware corporation, with offices at 1585 Broadway, New York, NY 10036.

WHEREAS, on the date hereof, 100% of the issued and outstanding limited liability company interests (the "Membership Interests") of Williams Bio-Energy, LLC, a Delaware limited liability company ("WBE") was transferred to Aventine Renewable Energy Holdings, Inc. (f/k/a CP RS Holdings, Inc.), a Delaware corporation ("Buyer"), pursuant to the Purchase Agreement dated as of February 19, 2003 (the "Purchase Agreement") among Buyer, The Williams Companies, Inc., a Delaware corporation and Williams Energy Services, LLC, a Delaware limited liability company, as of the Closing (as defined in the Purchase Agreement);

WHEREAS, on the date hereof, in connection with the consummation of the transactions contemplated by the Purchase Agreement, Buyer was substituted as sole member of WBE;

WHEREAS, on the date hereof, in connection with the consummation of the transactions contemplated by the Purchase Agreement, the current Amended and Restated Operating Agreement dated December 1, 2002 is replaced in its entirety;

WHEREAS, on the date hereof, pursuant to an Amended and Restated Certificate of Formation, WBE changed its name to Aventine Renewable Energy, LLC (the "Company"); and

WHEREAS, Aventine Renewable Energy Holdings, Inc. (the "Member") is the sole member of the Company and owns 100% of the Membership Interests in the Company.

NOW, THEREFORE, in order to establish the Company and provide for its authority to transact business, the Member hereby declares as follows:

ARTICLE 1
ADOPTION OF ORGANIZATIONAL DOCUMENTS;
PRIORITY OF AUTHORITIES

Section 1.01. *Certificate of Formation and Operating Agreement Adoption.* The form of the Amended and Restated Certificate of Formation of the Company which has been filed with the Secretary of State of the State of Delaware is hereby adopted by the Member, and all actions taken in organizing the Company, including, but not limited to, the filing of such Amended and Restated Certificate of Formation, are in all respects ratified, confirmed, adopted and approved. This Operating Agreement is hereby adopted by the Member to govern the internal business and affairs of the Company.

Section 1.02. *Priority of Authorities.* The provisions hereof shall be controlling except to the extent they are in direct conflict with provisions of the Amended and Restated Certificate of Formation of the Company as now in existence and as amended from time to time (the "Certificate") or provisions of the Delaware Limited Liability Company Act as now in existence and as amended from time to time (the "Act").

ARTICLE 2
OFFICES; RESIDENT AGENT

Section 2.01. *Offices.* The Company's principal place of business shall be 1300 South 2nd Street, Pekin, IL 61554, until changed as provided by the Act. The Company may also have such other offices and places of business as the business of the Company may require.

Section 2.02. *Name.* The name of the limited liability company governed hereby shall continue to be Aventine Renewable Energy, LLC. All business of the Company shall be conducted in such name.

Section 2.03. *Registered Agent.* The address of the Company's registered office in the State of Delaware is Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle, 19801. The name of the Company's registered agent at such address is The Corporation Trust Company.

ARTICLE 3
MANAGEMENT

Section 3.01. *General Powers.* Except as otherwise provided in the Act or the certificate of formation, the business and affairs of the Company shall be managed by or under the direction of the Board of Directors (the "Board");

provided that the Company shall not take (and shall not cause or permit its subsidiaries to take) any of the actions set forth on Annex I hereto without the approval of a majority of the entire Board of Directors.

Section 3.02. *Board Of Directors.* (a) The Board shall consist of three (3) Directors. The authorized number of Board of Directors may be increased or decreased, as determined by the Member. Directors shall be appointed by, and may be removed or replaced at, the discretion of the Member, with or without cause.

(b) The Board shall act by resolution duly adopted by vote at a meeting of the Board or by consent in writing of all Directors. At all Board meetings, Directors may vote in person or by proxy. Directors may participate in a meeting by any means of communication by which all Directors participating in such meeting may simultaneously hear each other during the meeting.

Directors shall serve until their resignation or until their successors are appointed.

Section 3.03. *Appointment and Removal of Directors.* The Member may at any time, by written notice, substitute a new Director to serve or designate an alternate to act for and in place of an existing Director.

Section 3.04. *Exercise of Authority Granted to the Board.*

(a) Subject to the provisions of Section 3.01, Annex I, paragraph (b) below or otherwise contained in this Operating Agreement, the Board may delegate such general or specific authority to the Officers of the Company as it considers desirable. The Officers of the Company may, subject to any restraints or limitations imposed by the Board, exercise the authority granted to them. Officers shall be appointed by, and may be removed or replaced at, the discretion of the Member, with or without cause.

(b) Subject to the foregoing, the Officers of the Company shall be fully authorized to handle the day-to-day business and decisions of the Company.

Section 3.05. *Meetings of the Board.* (a) Meetings of the Directors shall be held from time-to-time on the date and at the time determined by the President or any Director of the Company.

(b) Unless waived in writing by all of the Directors, at least five business days' prior notice of any meeting shall be given to each Director, except in the case of an emergency meeting. Such notice shall state the purpose for which such meeting has been called.

(c) A quorum shall be required for any meeting or action by the Board of Directors. Two (2) Director shall constitute a quorum.

(d) The Board shall cause to be kept a book of minutes of all of its meetings in which there shall be recorded the time and place of such meeting, whether regular of special, and if special, by whom such meeting was called, the notice thereof given, the name of those present and the proceedings thereof. Copies of any consents in writing shall also be filed in such minute book.

(e) *Officers of the Company.* The Company shall have such officers (the "Officers") as may be designated by the Member from time-to-time, who shall act as agents of the Company, who shall have such powers as are usually exercised by comparably designated officers of a Delaware corporation and who shall have the power to bind the Company through the exercise of such powers, subject to the provisions of Section 3.01 and Annex I.

ARTICLE 4 GENERAL PROVISIONS

Section 4.01. *Notice.* Any notice, payment, demand, or communication required or permitted to be given by any provision of this Operating Agreement shall be in writing or by facsimile and shall be deemed to have been delivered, given, and received for all purposes (a) if delivered personally to the person or to an officer of the person to whom the same is directed or (b) when the same is actually received (if a Business Day, or if not, on the next succeeding Business Day) if sent either by courier or delivery service or registered or certified mail, postage and charges prepaid, or by facsimile, if such facsimile is followed by a hard copy of the facsimile communication sent by registered or certified mail, postage and charges prepaid, addressed as follows, or to such other address as such person may from time to time specify by notice to the Member:

- (i) If to the Company: AVENTINE RENEWABLE ENERGY, LLC
Attn: Ronald H. Miller
1300 South 2nd Street
Pekin, IL 61554
Facsimile: (309) 346-2719

And

- (ii) If to the Member, to the address set forth in the preamble hereof.

Section 4.02. *Binding Effect.* Except as otherwise provided herein, every covenant, term and provision hereof shall be binding upon and inure to the benefit

of the Member and its permitted successors, transferees, and assigns (including any assignee for security purposes or person holding a security interest).

Section 4.03. *Severability.* Except as otherwise provided in the succeeding sentence, every provision of this Operating Agreement is intended to be severable, and, if any term or provision hereof is illegal or invalid for any reason whatsoever, such illegality or invalidity shall not affect the validity or legality of the remainder of this Operating Agreement. The preceding sentence of this Section shall be of no force or effect if the consequence of enforcing the remainder of this Operating Agreement without such illegal or invalid term or provision would be to cause the Member to lose the benefit of its economic bargain.

Section 4.04. *Indemnification.* (a) To the fullest extent permitted by the laws of the State of Delaware, the Member shall not be liable to the Company for any loss, damage or claim for any loss, damage or claim incurred by such Member by reason of any act or omission performed or omitted by such Member.

(b) The Member (and the heirs, executors or administrators of such Person) who was or is a party or is threatened to be made a party to, or is involved in any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that such Member is or was a Member, shall be indemnified and held harmless by the Company to the fullest extent permitted by the laws of the State of Delaware for directors and officers of corporations organized under the laws of the State of Delaware. The right to indemnification conferred in this Section shall also include the right to be paid by the Company the expenses incurred in connection with any such proceeding in advance of its final disposition to the fullest extent authorized by the laws of the State of Delaware for directors and officers of corporations organized under the laws of the State of Delaware. The right to indemnification conferred in this Section shall be a contract right.

(c) The Company may, by action of the Member, provide indemnification to such other directors, officers, employees and agents of the Company or other persons who are or were serving at the request of the Company as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise to such extent and to such effect as the Member shall determine to be appropriate.

(d) The Company shall have the power to purchase and maintain insurance on behalf of any person who is or was a Member, partner of any Member, officer, employee or agent of the Company, or is or was serving at the request of the Company as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any expense, liability or loss incurred by such person in any such capacity or arising

out of his status as such, whether or not the Company would have the power to indemnify him against such liability under the laws of the State of Delaware.

(e) The rights and authority conferred in this Section are not exclusive of any other right which any person may otherwise have or hereafter acquire.

(f) Neither the amendment of this Section, nor, to the fullest extent permitted by the laws of the State of Delaware, any modification of law, shall eliminate or reduce the effect of this Section in respect of any acts or omissions occurring prior to such amendment or modification.

Section 4.05. *Survival of Indemnification Obligations.* All indemnities provided for herein shall survive the transfer of any Membership Interest and the liquidation of the Company.

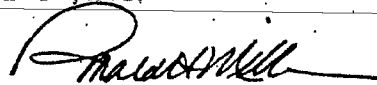
Section 4.06. *Tax Matters.* The Member shall cause to be prepared and filed all necessary federal and state income tax returns for the Company. The Member intends for the Company to be treated as a partnership, and not as an association taxable as a corporation, for federal and state income tax purposes, but not for any other purposes.

Section 4.07. *Choice of Law.* This Operating Agreement shall be construed and interpreted according to the laws of the State of Delaware.

IN WITNESS WHEREOF, the undersigned has executed this Amended
and Restated Operating Agreement as of May 30, 2003.

AVENTINE RENEWABLE ENERGY
HOLDINGS, INC.

By:




Name: Ronald H. Miller

Title: President

Attachment #6

WILLIAMS ETHANOL SERVICES, INC.
A Delaware Corporation

1,000 Shares



WILLIAMS ETHANOL SERVICES, INC.

Authorized Capital Stock 1,000 Shares

1,000 Shares

WILLIAMS ETHANOL SERVICES, INC.
William Bio-Energy, LLC

One thousand
Shares of the Capital Stock of
Williams Ethanol Services, Inc. fully paid and non-assessable

*transferrable only on the books of the Corporation by the holder hereof in
person or by attorney upon surrender of this Certificate properly endorsed.*

**IN WITNESS WHEREOF, the said Corporation has caused this Certificate to be signed
by its duly authorized officers and its corporate seal to be hereunto attested.**

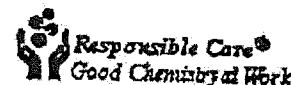
this 9th day of February 2001

SECRETARY
Shirley Wells

CHIEF EXECUTIVE OFFICER
John H. Hill

SHIRLEY WELLS
SECRETARY

JOHN H. HILL
CHIEF EXECUTIVE OFFICER

OxyChem.**MATERIAL SAFETY DATA SHEET****1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

Occidental Chemical Corporation

5005 LBJ Freeway

P.O. Box 809050

Dallas, Texas 75380-9050

24 HOUR EMERGENCY TELEPHONE:

1-800-733-3665 or 1-972-404-3228 (U.S.);

32.3.575.55.55 (Europe);

1800-033-111 (Australia)

TO REQUEST AN MSDS:

1-866-295-5278 or 1-615-399-5148

CUSTOMER SERVICE:

1-800-752-5151 or 1-972-404-3800

MSDS NUMBER: M32415

SUBSTANCE: CAUSTIC SODA LIQUID (ALL GRADES)

TRADE NAMES:

Caustic Soda Diaphragm Grade 10%, 15%, 18%, 20%, 25%, 30%, 35%, 40%, 50%; Caustic Soda Rayon Grade 18%, 20%, 25%, 30%, 50%; 50% Caustic Soda Rayon Grade OS; Caustic Soda Membrane 6%, 18%, 20%, 25%, 48%, 50%; 50% Caustic Soda Membrane OS; 50% Caustic Soda Diaphragm OS; 50% Caustic Soda Purified; 50% Caustic Soda Purified OS; Caustic Soda Liquid 70/30; Membrane Blended; 50% Caustic Soda Membrane (Northeast); 50% Caustic Soda Diaphragm (West Coast)

SYNONYMS:

Sodium hydroxide solution

PRODUCT USE: metal finishing, cleaner, process chemical, petroleum industry

REVISION DATE: Apr 07 2004

2. COMPOSITION, INFORMATION ON INGREDIENTS

COMPONENT: WATER

CAS NUMBER: 7732-18-5

PERCENTAGE: 48.5-94.5

COMPONENT: SODIUM HYDROXIDE

CAS NUMBER: 1310-73-2

PERCENTAGE: 5.5-51.5

COMPONENT: SODIUM CHLORIDE

Post-it® Fax Note	7671	Date	2/18	# of pages	7
To	Joe	From	Cathy		
Co./Dept.	Aventine	Co.	Rowell		
Phone #		Phone #			
Fax #		Fax #			

CAS NUMBER: 7647-14-5

PERCENTAGE: 0-1.3

3. HAZARDS IDENTIFICATION

NFPA RATINGS (SCALE 0-4): HEALTH=3 FIRE=0 REACTIVITY=0

HMIS RATINGS (SCALE 0-4): HEALTH=3 FLAMMABILITY=0 REACTIVITY=1

EMERGENCY OVERVIEW:

COLOR: colorless

PHYSICAL FORM: liquid

ODOR: odorless

MAJOR HEALTH HAZARDS: MAY CAUSE BURNS TO THE RESPIRATORY TRACT, SKIN, EYES AND GASTROINTESTINAL TRACT. MAY CAUSE PERMANENT EYE DAMAGE.**POTENTIAL HEALTH EFFECTS:****INHALATION:****SHORT TERM EXPOSURE:** irritation (possibly severe), burns, pulmonary edema**LONG TERM EXPOSURE:** to our knowledge, no effects are known**SKIN CONTACT:****SHORT TERM EXPOSURE:** irritation (possibly severe), burns**LONG TERM EXPOSURE:** dermatitis**EYE CONTACT:****SHORT TERM EXPOSURE:** irritation (possibly severe), burns, eye damage, blindness**LONG TERM EXPOSURE:** visual disturbances**INGESTION:****SHORT TERM EXPOSURE:** irritation (possibly severe), burns, nausea, vomiting**LONG TERM EXPOSURE:** to our knowledge, no effects are known**CARCINOGEN STATUS:**

OSHA: No

NTP: No

IARC: No

4. FIRST AID MEASURES

INHALATION: If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. If respiration or pulse has stopped, have a trained person administer Basic Life Support (Cardio-Pulmonary Resuscitation/Automatic External Defibrillator) and CALL FOR EMERGENCY SERVICES IMMEDIATELY.**SKIN CONTACT:** Immediately flush contaminated areas with water. Remove contaminated clothing, jewelry, and shoes immediately. Wash contaminated areas with soap and water. Thoroughly clean and dry contaminated clothing before reuse. Discard contaminated leather goods. GET MEDICAL ATTENTION IMMEDIATELY.**EYE CONTACT:** Immediately flush eyes with a directed stream of water for at least 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissues. Washing eyes within several seconds is essential to achieve maximum effectiveness. GET MEDICAL ATTENTION IMMEDIATELY.**INGESTION:** Never give anything by mouth to an unconscious or convulsive person. If swallowed, do not induce vomiting. Give large amounts of water. If vomiting occurs spontaneously, keep airway clear. Give more

water when vomiting stops. GET MEDICAL ATTENTION IMMEDIATELY.

NOTE TO PHYSICIAN: The absence of visible signs or symptoms of burns does NOT reliably exclude the presence of actual tissue damage.

5. FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARDS: Negligible fire hazard.

EXTINGUISHING MEDIA: Use extinguishing agents appropriate for surrounding fire.

FIRE FIGHTING: Move container from fire area if it can be done without risk. Cool containers with water.

SENSITIVITY TO MECHANICAL IMPACT: Not sensitive

SENSITIVITY TO STATIC DISCHARGE: Not sensitive

FLASH POINT: not flammable

6. ACCIDENTAL RELEASE MEASURES

OCCUPATIONAL RELEASE:

Shovel dry material into suitable container. Liquid material may be removed with a vacuum truck. Flush spill area with water, if appropriate. Keep out of water supplies and sewers. This material is alkaline and may raise the pH of surface waters with low buffering capacity. Releases should be reported, if required, to appropriate agencies. Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800)424-8802 (USA) or (202)426-2675 (USA).

7. HANDLING AND STORAGE

STORAGE: Store and handle in accordance with all current regulations and standards. Keep container tightly closed and properly labeled. Do not store in aluminum container or use aluminum fittings or transfer lines, as flammable hydrogen gas may be generated. Keep separated from incompatible substances.

HANDLING: Avoid breathing vapor or mist. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. When mixing, slowly add to water to minimize heat generation and spattering.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE LIMITS:

SODIUM HYDROXIDE:

2 mg/m³ OSHA TWA

2 mg/m³ OSHA ceiling (vacated by 58 FR 35338, June 30, 1993)

2 mg/m³ ACGIH ceiling

2 mg/m³ MEXICO peak

VENTILATION: Provide local exhaust ventilation where dust or mist may be generated. Ensure compliance with applicable exposure limits.

EYE PROTECTION: Wear chemical safety goggles with a faceshield to protect against skin contact when appropriate. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

CLOTHING: Wear chemical resistant clothing and rubber boots when potential for contact with the material exists. Contaminated clothing should be removed, then discarded or laundered.

GLOVES: Wear appropriate chemical resistant gloves.

PROTECTIVE MATERIAL TYPES: butyl rubber, natural rubber, neoprene, nitrile, polyvinyl chloride (PVC), Tychem(R)

RESPIRATOR: A NIOSH approved respirator with N95 (dust, fume, mist) filters may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits, or when symptoms have been observed that are indicative of overexposure.

A half facepiece air-purifying respirator may be used in concentrations up to 10X the acceptable exposure level and a full facepiece air-purifying respirator may be used in concentrations up to 50X the acceptable exposure level.

Supplied air should be used when the level is expected to be above 50X the acceptable level, or when there is a potential for uncontrolled release.

A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: liquid

APPEARANCE: clear

COLOR: colorless

ODOR: odorless

BOILING POINT: 230-291 F (110-144 C)

FREEZING POINT: -26 to 59 F (-32 to 15 C)

VAPOR PRESSURE: 13-135 mmHg @ 60 C

VAPOR DENSITY: Not available

SPECIFIC GRAVITY (water=1): 1.11-1.53 @ 15.6 C

DENSITY: 9.27-12.76 lbs/gal @ 15.6 C

WATER SOLUBILITY: 100%

PH: 14.0 (7.5% solution)

VOLATILITY: Not available

ODOR THRESHOLD: Not available

EVAPORATION RATE: Not available

COEFFICIENT OF WATER/OIL DISTRIBUTION: Not available

10. STABILITY AND REACTIVITY

REACTIVITY: Stable at normal temperatures and pressure.

CONDITIONS TO AVOID: Carbon monoxide gas may form upon contact with reducing sugars, food and beverage products in enclosed spaces.

INCOMPATIBILITIES: acids, halogenated compounds, prolonged contact with aluminum, brass, bronze, copper, lead, tin, zinc or other alkali sensitive metals or alloys

HAZARDOUS DECOMPOSITION:

Thermal decomposition products: None known.

POLYMERIZATION: Will not polymerize.

11. TOXICOLOGICAL INFORMATION

CAUSTIC SODA LIQUID (ALL GRADES):

TOXICITY DATA: Sodium Hydroxide: 1350 mg/kg Dermal-Rabbit LD50, 220 mg/kg (50% solution) Oral-Rat LD50. The severity of the tissue damage is a function of its concentration, the length of tissue contact time, and local tissue conditions. After exposure there may be a time delay before irritation and other effects occur. This material is a strong irritant and is corrosive to the skin, eyes, and mucous membranes. This material may cause severe burns and permanent damage to any tissue with which it comes into contact. Inhalation will cause severe irritation, possible burns with pulmonary edema, which may lead to pneumonitis. Skin contact with this material may cause severe irritation and corrosion of tissue. Eye contact can cause severe irritation, corrosion with possible corneal damage and blindness. Ingestion may cause irritation, corrosion/ulceration, nausea, and vomiting. In general, chronic effects are due to long-term irritation. This material may cause dermatitis on the skin, or recurrent corneal ulceration and visual disturbances. In rare cases reports have noted long-term inhalation causes bronchial inflammatory reaction or obstructive airway dysfunction.

12. ECOLOGICAL INFORMATION

ECOTOXICITY DATA:

FISH TOXICITY: This material has exhibited moderate toxicity to aquatic organisms. For sodium hydroxide: 00 ppm LC50 Daphnia; 25 ppm 24 hours LC50 Brook trout; 48 ppm LC50 King salmon; 33 - 100 ppm 48 hours LC50 Shrimp; 330 - 1000 ppm 48 hours LC50 Cockle

FATE AND TRANSPORT:

BIODEGRADATION: This material is inorganic and not subject to biodegradation.

PERSISTENCE: This material is believed to exist in the disassociated state in the environment.

BIOCONCENTRATION: This material is believed not to bioaccumulate.

OTHER ECOLOGICAL INFORMATION: This material has exhibited slight toxicity to terrestrial organisms.

13. DISPOSAL CONSIDERATIONS

Reuse or reprocess if possible. Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D002.

14. TRANSPORT INFORMATION

U.S. DOT 49 CFR 172.101:

PROPER SHIPPING NAME: Sodium hydroxide solution

ID NUMBER: UN1824

HAZARD CLASS OR DIVISION: 8

PACKING GROUP: II

LABELING REQUIREMENTS: 8

DOT HAZARDOUS SUBSTANCE(S):

Sodium hydroxide 1000 lb(s) (454 kg(s))

ADDITIONAL TRANSPORTATION OF DANGEROUS GOODS:

SHIPPING NAME: Sodium hydroxide solution

UN NUMBER: UN1824

CLASS: 8

PACKING GROUP/RISK GROUP: II

15. REGULATORY INFORMATION

U.S. REGULATIONS:

CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4):

SODIUM HYDROXIDE: 1000 LBS RQ

SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.30): Not regulated.

SARA TITLE III SARA SECTIONS 311/312 HAZARDOUS CATEGORIES (40 CFR 370.21):

ACUTE: Yes

CHRONIC: No

FIRE: No

REACTIVE: No

SUDDEN RELEASE: No

SARA TITLE III SECTION 313 (40 CFR 372.65): Not regulated.

OSHA PROCESS SAFETY (29CFR1910.119): Not regulated.

STATE REGULATIONS:

California Proposition 65: This product may contain contaminants known to the State of California to cause cancer or reproductive toxicity as listed under Proposition 65 State Drinking Water and Toxic Enforcement Act. For additional information, contact Customer Service.

NEW JERSEY WORKER AND COMMUNITY RIGHT TO KNOW:

REPORTING REQUIREMENT:

WATER 7732-18-5 48.5-94.5%

SODIUM HYDROXIDE 1310-73-2 5.5-51.5%

SODIUM CHLORIDE 7647-14-5 0-1.3%

RIGHT TO KNOW HAZARDOUS SUBSTANCE LIST:

SODIUM HYDROXIDE 1310-73-2 5.5-51.5%

SPECIAL HEALTH HAZARD SUBSTANCE LIST:

SODIUM HYDROXIDE 1310-73-2 5.5-51.5%

PENNSYLVANIA RIGHT TO KNOW:

REPORTING REQUIREMENT:

WATER 7732-18-5 48.5-94.5%

SODIUM HYDROXIDE 1310-73-2 5.5-51.5%

HAZARDOUS SUBSTANCE LIST:

SODIUM HYDROXIDE 1310-73-2 5.5-51.5%

ENVIRONMENTAL HAZARDOUS SUBSTANCE LIST:
SODIUM HYDROXIDE 1310-73-2 5.5-51.5%

SPECIAL HAZARDOUS SUBSTANCE LIST:
 Not regulated.

CANADIAN REGULATIONS:

CONTROLLED PRODUCTS REGULATIONS (CPR): This product has been classified in accordance with the criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

WHMIS CLASSIFICATION: D1B, E.

NATIONAL INVENTORY STATUS:

U.S. INVENTORY (TSCA): All the components of this substance are listed on or are exempt from the inventory.

TSCA 12(b) EXPORT NOTIFICATION: Not listed.

CANADA INVENTORY (DSL/NDL): All components of this product are listed on the DSL.

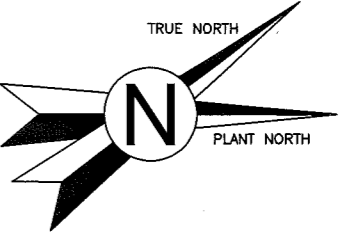
16. OTHER INFORMATION

IMPORTANT: The information presented herein, while not guaranteed, was prepared by competent technical personnel and is true and accurate to the best of our knowledge. **NO WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, OR WARRANTY OR GUARANTY OF ANY OTHER KIND, EXPRESS OR IMPLIED, IS MADE REGARDING PERFORMANCE, SUITABILITY, STABILITY OR OTHERWISE.** The information included herein is not intended to be all-inclusive as to the appropriate manner and/or conditions of use, handling and/or storage. Factors pertaining to certain conditions of storage, handling, or use of this product may involve other or additional safety or performance considerations. While our technical personnel will be happy to respond to questions regarding safe handling and use procedures, safe handling and use remains the responsibility of the customer. No suggestions for use are intended to, and nothing herein shall be construed as a recommendation to, infringe any existing patents or violate any laws, rules, regulations or ordinances of any governmental entity.

Attachment #8

ILLINOIS RIVER

TOTAL SQUARE FEET OF BUILDINGS & UTILITIES	
3	STEEL HOUSE = 15,923 Sq. Ft.
5	MILL HOUSE = 15,343 Sq. Ft.
7	ALCOHOL BUILDING = 6,942 Sq. Ft.
13	WATER SOFTENER = 2,034 Sq. Ft.
17	FEED HOUSE = 38,903 Sq. Ft.
19	POWER HOUSE = 7,186 Sq. Ft.
20	PUMP ROOM = 4,708 Sq. Ft.
21	BLACKSMITH SHOP = 3,284 Sq. Ft.
23	BOILER HOUSE = 25,552 Sq. Ft.
41	RECEIVING = 13,714 Sq. Ft.
43	WAREHOUSE = 44,527 Sq. Ft.
47	INCUBATOR PUMP HOUSE = 701 Sq. Ft.
55	FOAM STORAGE = 2,685 Sq. Ft.
65	ADMINISTRATION = 19,094 Sq. Ft.
66	TRAINING = 2,937 Sq. Ft.
73C	WASTE TREATMENT BUILDINGS = 31,241 Sq. Ft.
74	SECURITY OFFICE = 4,570 Sq. Ft.
79	GARAGE & PAINT SHOP = 10,062 Sq. Ft.
79A	SHEET METAL SHOP = 4,143 Sq. Ft.
80	CORN RECEIVING = 4,348 Sq. Ft.
83	RIVER WATER PUMP HOUSE = 681 Sq. Ft.
83	SUBSTATION = 1,563 Sq. Ft.
102	CLUB HOUSE = 3,465 Sq. Ft.
FENCES = 16,463 FEET LONG	
SEWER #1 = 5,403 FEET LONG	
SEWER #2 = 2,889 FEET LONG	



BUILDING SCHEDULE	
1	CORN ELEVATOR AND RAIL CORN UNLOADING
2	CORN STORAGE
3	STEELHOUSE
5	MILLHOUSE
7	ALCOHOL BUILDING
7A	ALCOHOL TANK FARM AND LOADING
13	WATER SOFTENER BUILDING
13A	FIRE PUMP HOUSE
17	FEEDHOUSE AND FEED SHIPPING
19	POWERHOUSE
20	PUMP ROOM
21	RIGGERS AND BLACKSMITH SHOP
23	BOILERHOUSE
41	RECEIVING, MECH. STORES, AND INST./ELECT. SHOP
43	WAREHOUSE AND MFG. SUPPLIES
47	INCUBATOR PUMP HOUSE
49	C.C.D.S. STORAGE TANK
53A	STORAGE TANKS (AMMONIA, ACID, AND CAUSTIC)
53B	SACCHARIFICATION TANKS
53C	INCUBATION TANKS
55	ADMINISTRATION AND EXECUTIVE OFFICES
66	TRAINING
73C	WASTE WATER TREATMENT PLANT
73D	WASTE WATER TREATMENT PLANT (1ST. ADDITION)
73E	ANAEROBIC SYSTEM
74	SECURITY OFFICE AND LOCKER ROOM
79	GARAGE AND PAINT STORAGE
79A	SHEET METAL SHOP
80	TRUCK CORN UNLOADING
83	RIVER WATER PUMPING STATION
85	BIOPRODUCT PLANT
98C	FUEL OIL STORAGE
99	PROCESS WATER TANKS
200	DRY MILL CONTROL ROOM

MIDWEST GRAIN PRODUCTS INGREDIENTS (INDUSTRIAL)

PEKIN PAPERBOARD (INDUSTRIAL)

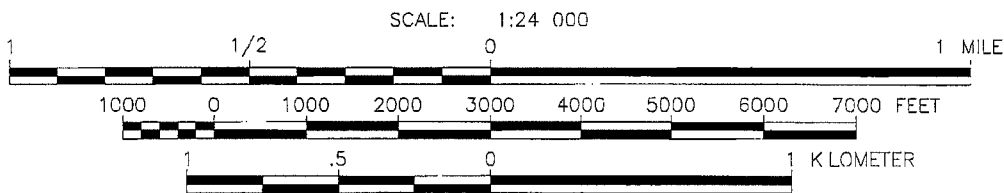
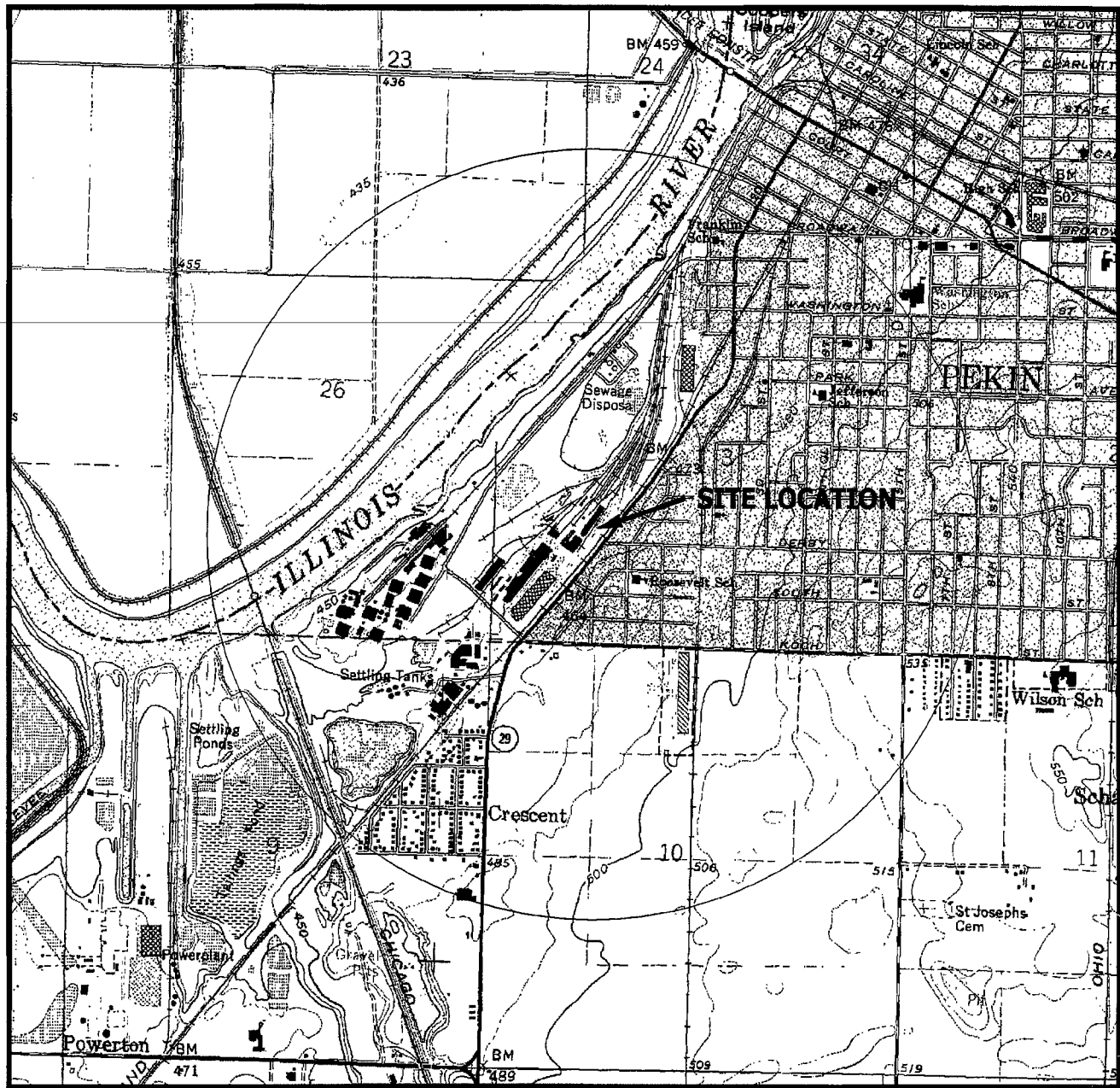
PEKIN SANITARY SEWER PLANT (INDUSTRIAL)

AREA = 250,521 ACRES = 6

NORTH YARD STORAGE AREA

TOTAL PLANT ACREAGE = 127 ±

PLOT PLAN	
Scale: 1" = 150'	Revision: 1
Drawn By: MSB	Checked By: R.H.
Date: 6-25-07	



NORTH

MAP REFERENCE:

PORTION OF U.S.G.S. QUADRANGLE MAP
7 1/2 MINUTE SERIES (TOPOGRAPHIC)
PEKIN, ILLINOIS 1960 PHOTOREVISED 1967 AND 1979



QUADRANGLE LOCATION

AVENTINE RENEWABLE ENERGY'S
1300 SOUTH 2ND STREET
PEKIN, ILLINOIS

FIGURE 2-2
3 KM DISTANCE AROUND AVENTINE
RENEWABLE ENERGY'S PEKIN FACILITY

DATE:
JANUARY 6, 2005
JOB NO.:
25365058
DRAWN BY: BKR
CHK'D BY: BF
SCALE:
AS SHOWN

URS

1701 GOLF ROAD, SUITE 1000
ROLLING MEADOWS, ILLINOIS 60008-4227
PHONE: 847.228.0707
FAX: 847.228.1115

TABLE 2-1

IDENTIFICATION AND CLASSIFICATION OF LAND USE TYPES

TYPE	USE AND STRUCTURES	VEGETATION
I1	Heavy Industrial Major chemical, steel and fabrication industries; generally 3-5 story buildings, flat roofs	Grass and tree growth extremely rare; <5% vegetation
I2	Light-Moderate Industrial Railyards, truck depots, warehouses, industrial parks, minor fabrications; generally 1-3 story buildings, flat roofs	Very limited grass, trees almost totally absent; <5% vegetation
C1	Commercial Office and apartment buildings, hotels; >10 story heights, flat roofs	Limited grass and trees; <15% vegetation
R1	Common Residential Single-family dwellings with normal easements; generally one story, pitched roof structures; frequent driveways	Abundant grass lawns and lightly to moderately wooded; >70% vegetation
R2	Compact Residential Single, some multiple, family dwellings with close spacing; generally <2 story, pitched roof structures; garages (via alley), no driveways	Limited lawn sizes and shade trees; <30% vegetation
R3	Compact Residential Old multi-family dwellings with close (<2 m) lateral separation; generally 2 story, flat roof structures; garages (via alley) and ash pits, no driveways	Limited lawn sizes, old established shade trees; <35% vegetation
R4	Estate Residential Expensive family dwellings on multi-acre tracts	Abundant grass lawns and lightly wooded; >80% vegetation
A1	Metropolitan Natural Major municipal, state, or federal parks, golf courses, cemeteries, campuses; occasional single-story structures	Nearly total grass and lightly wooded; >95% vegetation
A2	Agricultural Rural	Local crops (e.g., corn, soybeans); 95% vegetation
A3	Undeveloped Uncultivated, wasteland	Mostly wild grasses and weeds, lightly wooded; >90% vegetation
A4	Undeveloped Rural	Heavily wooded; 95% vegetation
A5	Water Surface Rivers, lakes	

Attachment #11

Meteorological Data March 27, 2008

WBAN	Date	Time	StationType	Visibility	DryBulbFarenheit	RelativeHumidity	WindSpeed	WindDirection	StationPressure	HourlyPrecip
14842	20080327	1208	11	4	39	89	16	50	29.13	
14842	20080327	1223	11	2	39	89	15	60	29.12	
14842	20080327	1233	11	1.75	39	93	14	50	29.12	
14842	20080327	1241	11	2	39	89	15	60	29.12	
14842	20080327	1254	11	2	39	89	16	70	29.11	
14842	20080327	1326	11	1.75	39	89	16	60	29.11	
14842	20080327	1347	11	1.25	37	96	16	50	29.1	
14842	20080327	1354	11	1.25	38	89	17	40	29.11	T
14842	20080327	1426	11	2	37	96	22	50	29.1	
14842	20080327	1431	11	4	39	89	20	50	29.11	
14842	20080327	1447	11	5	39	89	16	60	29.1	
14842	20080327	1454	11	4	39	89	20	60	29.09	0.08
14842	20080327	1517	11	2	39	89	18	60	29.08	
14842	20080327	1554	11	2	38	89	14	50	29.08	T
14842	20080327	1617	11	3	37	89	13	360	29.14	
14842	20080327	1632	11	3	37	89	15	30	29.12	
14842	20080327	1641	11	2.5	37	89	11	40	29.13	
14842	20080327	1649	11	3	37	89	18	50	29.11	
14842	20080327	1654	11	3	37	89	16	40	29.11	0.06
14842	20080327	1704	11	3	37	89	16	50	29.09	

Attachment #12

May 19, 2008

Illinois Emergency Management Agency
2200 South Dirksen Parkway
Springfield, Illinois 62703

Re: Sodium Hydroxide Release
IEMA incident # H20080410



1300 South 2nd Street
Pekin, Illinois 61555-0010
309/347-9200
309/347-3800 fax
www.aventinereci.com

To Whom It May Concern,

This letter is intended to confirm a telephone conversation with a representative from the Illinois State Emergency Response Commission on March 28, 2008. The discussion was in regards to a sodium hydroxide spill that occurred at the dry mill ethanol plant on March 27th, 2008.

Remarks

The dry mill was undergoing a small shutdown in the distillation area to repair a coupling on a pump. While off-line the #1 evaporator was to be cleaned in place (CIP).

A CIP consists of a mixture of sodium hydroxide and water - heated to increase its cleaning ability - then circulated in the evaporator to remove protein deposits. A pre-cleaning rinse is performed before the sodium hydroxide and water solution is circulated to remove the loose material from the piping and vessels. The CIP system is mostly an automated system that is controlled from the distributed control system (DCS) and from a few manual valves in the process.

As the #1 evaporator underwent its cleaning cycle, another section of the process was being prepared for a CIP. The control room operator started the rinse water pump without knowing that a manual valve was left open to the evaporator. With the valve left open the rinse water traveled to the evaporator instead of its intended location. The evaporator filled up and burst a rupture disk on the emergency vent line. The vent line discharges horizontally out of the building approximately 20 feet above the ground. The hot sodium hydroxide and water mix poured out the vent on to the gravel below. The solution eventually made its way an area storm drain located 50 feet from the building. The release occurred for several minutes until the pressure was stabilized on the evaporator. Aventine determined that approximately 8,799 gallons of the sodium hydroxide and water solution reached the storm drain. Of the 8,899 gallons, it was determined that 565 gallons was sodium hydroxide. The reportable quantity for sodium hydroxide is 1000 pounds. Aventine calculated that 10,042 pounds had been released.

Corrective Action

Aventine performed an investigation to determine the root cause of the release. Results of the study would generate a plan to prevent the incident from occurring again. As a result of the investigation the following measures have been taken:

1. Protective covers have been installed on the area storm drains
2. Aventine's engineering team is checking the feasibility of automating the manual valve that was left open. The valve would be included in the CIP system which would only allow it to open in the proper automated CIP sequence.
3. The engineering team is also designing, procuring and coordinating the materials and labor to extend the emergency vent to the secondary containment located nearby.

If you have any questions, please feel free to call Steve Antonacci at (309) 347-9241.

Very truly yours,



Rick Towery
Operations Manager

cc: S. Antonacci
S. Dawson

Attachment #13

May 19, 2008

Bill Nowlin
Chair, Tazewell County, LEPC
Tazewell County Emergency Services Disaster Agency (ESDA)
334 Elizabeth Street, Ste. 200,
Pekin, Illinois 61554



1300 South 2nd Street
Pekin, Illinois 61555-0010
309/347-9200
309/347-3800 fax
www.aventineren.com

Re: Sodium Hydroxide Release March 27, 2008

Dear Mr. Nowlin,

This letter is intended to confirm a telephone conversation with Bill Nowlin from the Tazewell County Emergency Services Disaster Agency (ESDA) on March 28, 2008. The discussion was in regards to a sodium hydroxide spill that occurred at the dry mill ethanol plant on March 27th, 2008.

Remarks

The dry mill was undergoing a small shutdown in the distillation area to repair a coupling on a pump. While off-line the #1 evaporator was to be cleaned in place (CIP).

A CIP consists of a mixture of sodium hydroxide and water - heated to increase its cleaning ability - then circulated in the evaporator to remove protein deposits. A pre-cleaning rinse is performed before the sodium hydroxide and water solution is circulated to remove the loose material from the piping and vessels. The CIP system is mostly an automated system that is controlled from the distributed control system (DCS) and from a few manual valves in the process.

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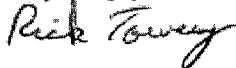
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If you have any questions, please feel free to call Steve Antonacci at (309) 347-9241.

Very truly yours,



Rick Towery
Operations Manager

cc: S. Antonacci
S. Dawson